

SUMMER 2013

# Equine Science Center UPDATE

• • • • • "Better Horse Care through Research and Education"

## Upcoming Events

### Center at the Hambletonian Race

Saturday, August 03, 2013  
Paddock Park  
Meadowlands Racetrack  
East Rutherford, NJ

### NJ State 4-H Horse Show

Friday, August 30, 2013  
Horse Park of New Jersey  
Allentown, NJ

### Open Space Pace

Saturday, September 21, 2013  
Freehold Raceway  
Freehold, NJ

### Equine Science Update

Tuesday, November 19, 2013  
Cook Campus Center  
New Brunswick, NJ  
[esc.rutgers.edu](http://esc.rutgers.edu)

# RUTGERS

New Jersey Agricultural  
Experiment Station

## Open House Success

The Equine Science Center held its annual Open House on Wednesday, July 24. The always popular summer Open House provides an opportunity for the Center to share its cutting edge research with the greater equine community in New Jersey and guests visiting from neighboring states.

Over 100 guests filled the Red Barn to get an up close look at "Le Cheesecake aka "CC"" running on the treadmill. Much to the delight of all in attendance, CC proved to be a star performer and galloped at an impressive 22 miles per hour. Many were surprised to learn that horses and humans share similar physiological responses to exercise; which is why horses are the best animal model for human medicine. Like humans, the horse is the only animal that sweats through its skin to thermoregulate. CC worked up a sweat during her stellar performance and was ready for a cool bath immediately thereafter.

Following the treadmill demo, guests were divided into three teams of approximately 25, and rotated among three designated program areas. Equine Science Center faculty, staff, and students facilitated a barn safety scavenger hunt in the stall-side of the Red Barn. Guests were challenged to identify 20 safety hazards in the barn.

Another activity during the Open House was a tour of the exercise physiology research laboratory.

Guests were also delighted to witness CC and pasture buddy Marci run around on the Equi-Cizer, which resembles a real merry-go-round.

The third station featured a demonstration of equine anatomy using "RU Wish Bone," the Center's full size equine skeleton. Wish Bone was recently added as a teaching tool in equine anatomy courses as well as Rutgers Cooperative Extension programs.

The thrill of exploring the Equine Science Center's facilities attracted various youth groups and equine enthusiasts from around New Jersey and several guests from neighboring states. Many 4-H horse program, pony club members, and youth groups were in attendance. The Center was also excited to welcome a group of high school interns in the Public Health Research Institute at Rutgers-New Jersey Medical School (formerly UMDNJ).

In addition to the exciting program areas and treadmill demo, guests were given posters, activity booklets, and other exciting materials as thank you gifts. The official [photo gallery](#) for the Open House can be found on the Equine Science Center's Facebook page at [esc.rutgers.edu/fb](http://esc.rutgers.edu/fb).

For information about the Equine Science Center's future events, visit [esc.rutgers.edu](http://esc.rutgers.edu) or contact Tiffany Cody at [cody@njaes.rutgers.edu](mailto:cody@njaes.rutgers.edu) or 848-932-9419.





# From The Clubhouse

Karyn Malinowski, Ph.D., Director



Dear Friends

Since our last newsletter, spring finally arrived and the heat and humidity of summer are upon us. My colleagues and I have been busy traveling to New Mexico for the Equine Science Society's (ESS) bi-annual meeting where we spent several days learning about the latest equine research, teaching, and outreach programs from around the world. Also, congratulations to Kenneth McKeever who received the society's most prestigious recognition, the "*Distinguished Service Award*." Way to go Ken! Less than a week after the ESS meeting, I

traveled to Ireland to serve as an external examiner for the Equine Science Program at the University of Limerick. After all of that time in the air I was glad to return home.

Prior to leaving for ESS, I was busy promoting the Center and *Equine Science 4 Kids* at the Philadelphia Society for Promoting Agriculture and the Colonel Henry Rutgers Society's annual luncheon. Thanks to Tiffany Cody for her assistance in making both presentations seamless as we took the audiences "live" to our website.

Speaking of *Equine Science 4 Kids*, Center staff and students rolled out the red carpet for thousands of visitors on Ag Field Day at Rutgers Day. We launched the new "*Exercising HorsePower*" game that week to rave reviews. Right now we're investigating various opportunities to spread the word about the youth component of our website so that 4-H Horse Project members, Pony Club members, and young equine enthusiasts around the world can benefit from this important equine science educational tool.

We have been busy with visitors to the Equine Exercise Physiology Lab as well. We celebrated the month of the horse in June with a visit from the New Jersey State Board of Agriculture. I was especially pleased to see my former racehorse Jolee perform so well on the treadmill – pacing at 20 miles per hour with all four feet off the ground! Check out the



photos on our **Facebook** page. We had a packed house for our Open House on July 24. Details can be found in the cover story. Thanks to all of our faculty, staff, and students who made the day such a success (including RU Wish Bone!).

The Center is also gearing up for a presence at the New Meadowlands Racetrack on August 2 for the Hambletonian celebration. Also we will be participating again at the Open Space Pace event at Freehold Raceway on September 21. See you there!

The Equine Science Center is dedicated to advancing its mission of better horse care through research and education. In other words, the Center is here to help you learn about the "science of horses". We provide you with expertise on equine management and horse industry concerns. In addition to the actual horse, the Center is here to guide you in developing and implementing best management practices for maintaining an environmentally friendly horse farm. The Center works diligently to provide practical and realistic solutions to many farm management and pasture concerns such as preserving water quality, proper nutrient and waste management, weed control, and soil enrichment. We also assist with determining how to provide your horse with a nutritious and well-balanced diet. We offer science-based insight into what you should be feeding your horse as well as factual, unbiased information about supplements, hay, grain and feed. The science of horses and the expertise of the Center faculty extends beyond the aforementioned three areas. Our experts are also knowledgeable in equine exercise physiology, aging, responsible horse ownership, and much more. All of these resources are available to you. Obtaining this information is as simple as sending an email, placing a telephone call, or starting a conversation with us at an event. We are here to help you.

In closing, I would also like to ask you to help us. Please consider making a gift to support the research, initiatives, and programs of the Equine Science Center. No gift is too small. For information about how you can make a meaningful contribution, please contact me at [maliowski@aesop.rutgers.edu](mailto:maliowski@aesop.rutgers.edu) or 848-932-9419. Thank you for your support!

Bestest, karyn



## Partners



New Jersey Farm Bureau's primary purpose is to represent the overall interests and improve the financial well-being of farmers and our \$800 million industry. NJFB

activities are supported through voluntary membership and annual dues. Members have access to:

- Staff assistance on farming issues and regulatory problems.
- Educational workshops on topical issues such as farm labor, wildlife damage, and zoning.
- Weekly updates on legislation news and regulations affecting all aspects of farming.

It pays to be a NJ farm Bureau member! For a full list of membership levels and benefits, or to sign up, visit [www.njfb.org](http://www.njfb.org).

Established in 1961, the Standardbred Breeders & Owners Association of New Jersey [SBOANJ] has a membership comprised of horse breeders, drivers, trainers, owners, and backstretch personnel, and its mission is to support and promote the standardbred industry in New Jersey. The Board of Directors authorizes stallion, mare and foal registrations, negotiates with track management, actively oversees and administers a benefits program, and advances legislation favorable to the horse racing industry. For more information, please visit [www.sboanj.com](http://www.sboanj.com).



# Faculty Spotlight – Kenneth McKeever

Congratulations are in order for the Equine Science Center's associate director of research, Kenneth McKeever. During the Equine Science Society's (ESS) annual conference in New Mexico, McKeever received the organization's most prestigious honor, the "Distinguished Service Award in Equine Science".

The ESS "Distinguished Service Award" recognizes outstanding contributions in the field of equine science. Award recipients must also have a record of significant accomplishments in teaching, research and extension or service as it relates to advancement of the equine sciences and horse industry.

*What excites me the most is knowing that my efforts contribute to training the next generation of integrative and regulatory physiologists...*

Over the last 32 years McKeever and his collaborating students and colleagues have charted new ground in a number of areas of endocrinology, demonstrating the effects of exercise and training on the hormones that control blood pressure and blood volume. Those studies increase the understanding of the mechanism behind high blood pressure. Studies have also looked at the hormones associated with the control of energy balance and appetite with application towards understanding anorexia and obesity in humans and horses.

Many of McKeever's research studies have examined the effects of various drugs on performance. Partnerships with the NJ State



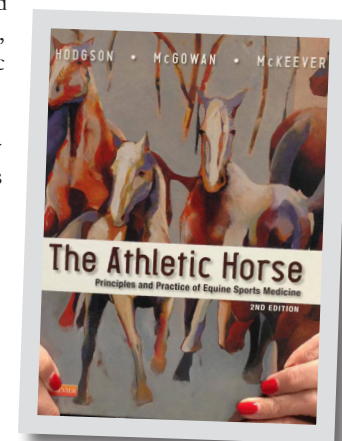
*Kenneth McKeever receives the "Distinguished Service Award"*

co-authors of chapter 21 titled "Training Standardbred Trotters and Pacers".

After many years of teaching and conducting research with horses, McKeever continues to be enthusiastic and passionate about equine science.

"What excites me the most about my work at the Center and Rutgers is knowing that my efforts contribute to training the next generation of integrative and regulatory physiologists who will follow in the footsteps of all of the great researchers who have used the horse as an animal model and exercise as one of their tools to make new and important discoveries benefiting horses and humans," says McKeever.

For more information about Kenneth McKeever's research, please visit [esc.rutgers.edu](http://esc.rutgers.edu) or call the Equine Science Center at 848-932-9419.



The New Jersey Department of Agriculture (NJDA) is an agency which oversees programs that serve virtually all New Jersey citizens. One of the Department's major priorities

is to promote, protect and serve the Garden State's diverse agriculture and agribusiness industries. In addition to the programs we offer to support production agriculture, NJDA also manages programs that feed schoolchildren, distribute surplus federal foods to soup kitchens and pantries that serve our needy citizens, conserve precious soil and water resources, protect farmland from development and preserve it for future agricultural use, expand export markets for fresh and processed agricultural products, and promote our commercial fishing industry, and administer the complete program of agriculture, food and natural resource education, which includes the State FFA Association. For more information about NJDA, please visit [www.nj.gov/agriculture/index.shtml](http://www.nj.gov/agriculture/index.shtml)

**LEAVE THE TREES ON  
YOUR FARM –  
NOT IN YOUR  
MAILBOX!**

Opt-in to receive the Equine Science Center newsletter via email instead of hardcopy print.

By going digital, you will receive two additional newsletters and special invites to annual events!

Just scan the QR code on the right using your smart phone and enter your preferred contact information. Or, you can email us at [cody@njaes.rutgers.edu](mailto:cody@njaes.rutgers.edu) with your name and email address.

Thanks for helping us **Go Green!**





# esc.rutgers.edu

Equine Science Center

Better Horse Care Through  
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## Summer Outreach

**During the summer months, the Equine Science Center is incredibly busy planning, facilitating, hosting and attending community events and functions. This is what we have been up to lately!**

"Month of the Horse" by recognizing the thousands of pleasure, show, and race horses that have a significant value and impact on the state. The Equine Science Center welcomed the NJ State Board of Agriculture on June 26 to tour its Equine Exercise Physiology Laboratory and Ryders Lane Demonstration Horse Farm facilities.

During their visit, State Board members along with President Jim Gimarese, Secretary of Agriculture Douglas Fisher, Director of Animal Health, Dr. Manoel Tamassia, and Monique Purcell, Director of Agriculture and Natural Resources, observed a demonstration of the high-speed equine exercise physiology treadmill in action. The demonstration was facilitated by Karyn Malinowski, Carey Williams and Kenneth McKeever. Ryck Sudyam, Chairman of the Rutgers University Board of Equine Advancement, was also in attendance.

The Board witnessed the equine treadmill in action as one of the mares paced in place at 25 miles per hour. The treadmill is one of the valuable tools that the Center uses to produce sound science.

The tour concluded at the Ryders Lane farm where researchers Laura Gladney, Mike Westendorf and Carey Williams provided an overview of an ongoing study comparing the

economic benefit of using continuous grazing versus rotational grazing systems.

The legislative tour was sponsored by Middlesex County.

### Rick's Saddle Shop New Rider Day

The Equine Science Center participated in "New Rider Day" at Rick's Saddle Shop in Cream Ridge, NJ on Thursday, June 27 to promote the many programs that it offers to children and adults. The purpose of the event was to introduce new riders with area barns, trainers, and other youth-focused equine resources in New Jersey.

For "New Rider Day," the Center presented the youth component of its website, "**Equine Science 4 Kids!**" The site contains a plethora of interactive games, kid-friendly research and equine information. This year, the Center launched a new online game: "**Exercising HorsePower!**" on [esc.rutgers.edu/kids](http://esc.rutgers.edu/kids). The game boasts a virtual equine exercise physiology lab which allows players to choose a horse, run it on the treadmill and gather data to analyze, just like the expert researchers at Rutgers University.

Attendees were provided Center materials and had an opportunity to win a gift basket at the end of the event.



*Secretary of Agriculture Douglas Fisher  
and Center Director Karyn Malinowski*

### Monmouth County Library Panel

On June 17, 2013, Karyn Malinowski, joined several equine industry experts to answer questions at the Panel Discussion on the Standardbred Horse Industry in Monmouth County. The event was hosted at the Monmouth County Library in honor of the Month of the Horse in New Jersey. Malinowski presented pertinent, science-based information regarding the economic impact of the equine industry in New Jersey and its sustainability, followed by answering questions from the audience.

Also on the panel were Harriet Honigfeld, Administrator, Farmland Preservation Program, Monmouth County Planning Board; Sam Landy, Esq., President, Open Space Pace; and Tom Luchento, President, Standardbred Breeders and Owners Association of New Jersey.

### State Board of Ag Tour

Throughout June, New Jersey celebrated the