

RUTGERS UNIVERSITY EQUINE SCIENCE QUARTERLY



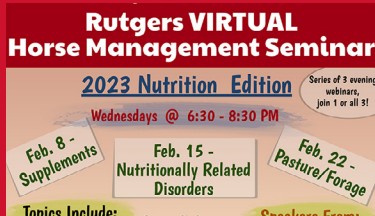
From Our Stable To Yours
Winter 2023

Inside the Issue:



08

2022 Evening
of Science &
Celebration



10

From The Lab:
The Horse
Management
Seminar



16

Chasing Her
Dream Job



A Lifetime Of Dedication: Dr. Octavia Brown's Commitment To The Equine Community

Dr. Octavia Brown has had quite a notable career, as evidenced by the multiple awards and accolades that she has received over the years.

She has been a teacher, educator, instructor, leader, and mentor to a

multitude of students and mentees over the years; but throughout it all her passion and love of horses, and what they are able to help us accomplish, is what has driven her life forward.

Ever since she was a little girl growing up in England, in the suburbs

From The Clubhouse



We look forward to
seeing everyone at the
2023 New Jersey Equine
Industry Summit!

Dear Friends,

I certainly hope that you all had an enjoyable holiday season. Happy New Year and best wishes for 2023! Let's keep our fingers crossed that this unseasonably mild winter stays with us. It's nice to be able to enjoy our animal without worrying about slipping on frozen ground and dealing with ice and snow everywhere!

The Equine Science Center ended 2022 on a celebratory note when we held our first in-person "Evening of Science and Celebration" since the beginning of Covid. Our keynote speaker was Dr. Frank Andrews from Louisiana State University who provided the latest information on the treatment of gastric ulcers in horses. This event was sponsored by the Mid-Atlantic Equine Medical Center located in Ringoes, New Jersey. Other speakers included our own Ken McKeever, Daniel Gimenez, and Ellen Rankins who each received funding from the Center for their research in 2021-22.

Highlights of the evening included the presentation of the "Spirit of the Horse award" to Dr. Octavia Brown in recognition of her stalwart support of the equine community, and her long-time commitment to the advancement of Equine Assisted Services nationwide.

The Gold Medal Horse Farm award was presented to Chrisie and Chris Van Cleef's Stoneleigh Stables in recognition of excellent environmental stewardship on an equine operation. This award is presently jointly by the Equine Science Center and the New Jersey Department of Agriculture.

See the feature story on the **Front Page** about Dr. Brown's life and accomplishments, and highlights from the evening with photos on **Page 8**.

Lord Nelson was busy with his friends at the Center with the production of his holiday blog posts. We all had fun making holiday horse treats, finding out about New Year resolutions, and learning about winter horse care.

Be sure to take a look at Lord Nelson's blog at <https://esc.rutgers.edu/blog/>, and scroll down to the "Winter Holiday Treats" post to view the video!

Enjoy the story about Alisa Herbst, our new post-doctoral associate who joined us this past summer from the University of Kentucky. We keep growing our family! See Dr. Herbst's story on **Page 16**.

We have some exciting new events coming soon in 2023. The Horse Management Seminar Webinar Series put together by our own Carey Williams will be held virtually once again on consecutive Wednesday evenings in February. Be sure to check out some of the "take-a-ways" that will be presented, learn about the nutrition-related topics, and find out where to register in our From the Lab section starting on **Page 10**.

On March 16, 2023 the Center will hold its first New Jersey Equine Industry Summit in over 20 years! Join us from 10AM-3PM at the Cook Student Center here in New Brunswick. The keynote speaker, Dr. Jill Stowe from the University of Kentucky, will present on "Economic Analysis of Equine Operations and Tips for Reducing Costs."

We also have the honor of having Jim Gagliano, President of the Jockey Club, and Mike Tanner, Executive Director of the United States Trotting Association, who will lead a discussion of the "Status of Horse Racing in the United States." We will also present some of the key highlights from our recent equine industry needs assessment survey that many of you participated in last year.

After lunch, we will breakout into individual breakout rooms with a team of leaders from within the horse industry serving as facilitators. You will have the opportunity of choosing your breakout session from the topics: Horse Health and Well-Being, Environmental Stewardship, Future of Horse Racing, Integrity of Equestrian Sport, Land Use and Policy Management and Industry Growth and Sustainability including Engaging Youth in Leadership Roles.

The event is free so come make your voices heard as we chart the horse industry's course for years ahead! For information on how to register, see the flyer on **Page 15**.

Also put on your calendars, Rutgers Giving Day/ Week, March 20-24 as we raise funds for the new Ronald S. Dancer Memorial Scholarship, the Junior Breeders Symposium on March 25, and Ag Field Day at Rutgers Day on April 29.

Come out and support our programs, you will have fun and learn a great deal. For more information on these events, take a look at the next page. Hope to see you soon!

Best,
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.



UMH Properties, Inc., is a real estate investment trust that owns and operates manufactured home communities in seven states throughout the northeast.

UMH has been in business since 1968, operating as a public company since 1985. Owning a portfolio of over 90 manufactured home communities, housing approximately 15,700 home sites.

In addition, owning over 810 acres of land for the development of new sites. It is our mission as a company to provide the best quality affordable home for the hard working residents of Pennsylvania.

UMH communities are perfect for residents of all ages, let us help up you find your dream home today.

For more information about UMH Properties, Inc., please visit: www.umh.com



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



Boehringer Ingelheim Animal Health is the second largest animal health business in the world, with presence in more than 150 countries, and a significant presence in the United States, with more than 3,100 employees in places that include Georgia, Missouri, Iowa, Minnesota, New Jersey and Puerto Rico.

The lives of animals and humans are interconnected in deep and complex ways. We know that when animals are healthy, humans are healthier too. Across the globe, our 9,700 employees are dedicated to delivering value through innovation, thus enhancing the well-being of both. Respect for animals, humans and the environment guides us every day. We develop solutions and provide services to protect animals from disease and pain. We support our customers in taking care of the health of their animals and protect our communities against life- and society-threatening diseases.

For more information about Boehringer Ingelheim Animal Health, please visit: www.boehringer-ingelheim.us

UPCOMING 2023 EVENTS

Horse Management Seminar: Research Driven Supplements

Wednesday, February 8, 15, 22, 2023

This year we have gone VIRTUAL!
Join us for 3 fun filled nights of
learning from 6:30pm - 8:30pm.

<https://go.rutgers.edu/2023HMS>

2023 New Jersey Equine Industry Summit

Thursday, March 16th, 2023

Cook Student Center
59 Biel Road
New Brunswick, NJ 08901

kylehart@njaes.rutgers.edu

Junior Breeders Livestock Symposium

Saturday, March 25, 2023

The Round Barn
65 Sheepfold Lane
New Brunswick, NJ 08901

eppinger@njaes.rutgers.edu

Ag Field Day @ Rutgers Day

Saturday, April 29, 2023

Red Barn - Cook Farm
Rutgers, The State
University of New Jersey
New Brunswick, NJ 08901

newbrunswick.rutgers.edu/rutgers-day

For more events, visit our website @ esc.rutgers.edu

A Lifetime Of Dedication

Continued from Pg. 1



The Household Calvary takes its summer holiday to Holkham, a village in the north-west of the county of Norfolk, England. (Photo from The Household Calvary Facebook page - <https://www.facebook.com/Hcav1660/photos/1998179510215339>).

right outside of London, Dr. Brown has had a strong connection with horses.

At just 8 years old she was sent to a week-long riding camp in Norfolk, England. Some might know of this area as the same destination that the English Household Calvary takes its summer holiday, where they can be seen horseback riding on the beaches along England's eastern coast.

Dr. Brown would return every year from the time she was 8 years old, until she was 15 for this weeklong adventure with horses. "I remember immediately falling in love with everything about horses and riding after that first experience," said Dr. Brown.

This love would entail numerous other riding vacations, as well as a plan to purchase a horse of her own. The only downfall to this plan might have been that she neglected to tell her parents (... and her age).

"When I was 11, my best friend (who was 12 at

the time) and I decided we wanted to buy our own pony – we did not bother to tell our parents as we were sure they would disapprove," remembers Dr. Brown. "We saved for weeks and did in fact buy that pony and made arrangements for its care in a field. We owned it for two days before our parents found out and made us give it back – first big heartbreak!! We found out later how proud they were of our initiative, and they let us down very gently."

Initiative could also be used to describe Dr. Brown's education and career trajectory. Graduating from a business college in London, she would go on to work in London before moving to Massachusetts where she worked in Cambridge as a secretary.

After moving to the United States, something that might have seemed daunting at the time to most, Dr. Brown again found herself back in the equine community. "I was introduced to the forward seat style of riding. In England we'd just ridden cross country, never taking equitation lessons," said Dr.

Brown. “I had to learn about trot diagonals, and canter leads, and how and when to change them – all things I’d done instinctively but knew nothing of the theory behind it all. Also, it was possible to (finally!!) have my own horse and support it myself.”

During this time, Dr. Brown went on to running a small therapeutic riding program for patients of the McLean Psychiatric Hospital. With no formal training, and some help from the art therapist at the hospital, Dr. Brown would go on to run a program that made a difference in the lives of the patients who took part in the program.

She would also go on to start the next chapter in her education. Not only attending seminars, but also getting real-world experience watching the patients interact with the horses, seeing what worked and what didn’t, Dr. Brown started to see how these horses would make the patients light up, and their personalities shine.

At the time, there was no real set in stone theory as to why working with horses provided a benefit to the human involved in horse-human interactions. While the general consensus was that people were happier and enjoyed their time interacting with horses, the theories behind these interactions were based on fields of thought such as art therapy. So Dr. Brown went on to create her own theory.

Using the framework of activities therapy, and employing the thought behind art therapy, she would go on to present a seminar at McLean Psychiatric Hospital on what she thought was happening during the sessions with these patients. This work would pay off as she submitted a paper on the very same seminar, as a part of her application to a graduate school in the area, and she was accepted in the program.

And so, Dr. Brown, without having ever received a bachelor’s degree, would go on to graduate with her Masters of Education from the Harvard Graduate School of Education. “Living in Cambridge, MA everyone was amazed that we hadn’t gone to college in the American sense,” said Dr. Brown, “my English roommate and I both worked for Harvard professors, and both went on to earn advanced

degrees from Harvard, without a bachelors! Where else would that be possible?”

During these same years, Dr. Brown was also working to create a community for likeminded people who also saw the benefits of the horse-human interaction. While relatively new in the United States, in Europe there were organizations doing similar work. “Then known as riding for the disabled, the effort began in the United Kingdom and Scandinavia in response to the polio outbreaks of the 1950’s. When people wanted to create an organization in the United States, they went to England to study their national program and brought the ideas back,” said Dr. Brown.

At a meeting in New York City in 1969, a group of these people from the United States who were already working in the field, got together and founded the North American Riding for the Handicapped Association, Inc. (NARHA).

A founding director of the organization, Dr. Brown would go on to serve as a member of the board of directors for four terms. NARHA would go on to become one of the first organizations in the world to offer a program to certify instructors in “riding for the handicapped”, host seminars and offer accreditation programs for centers, and host international workshops and mentoring training.

With the organization’s expanding focus and objectives, the name was changed to be more overarching to its current title, The Professional Association of Therapeutic Horsemanship International (PATH International).

At the same time, internationally, the Federation of Riding for the Disabled International (now known as The Federation of Horses in Education and Therapy International) was formed in the mid 1970’s to represent national organizations and offer congresses every three years all over the world.

NARHA became a member of this international organization (and Dr. Brown even served on that board from 1997 to 2003, being president from 2000 to 2003).

“Being at the threshold of the industry in the 1960’s I have been witness to how it has earned



Dr. Octavia Brown featured on the cover of the PATH International Magazine "Strides" in celebration of their 50th anniversary.

international acclaim as an effective intervention in so many lives," said Dr. Brown. "I have traveled all over the world to attend conferences, board meetings and visit colleagues. That has allowed me to see how different countries deal with the same challenges, and have different approaches to solving them. There is no one right way."

In 1971 Dr. Brown attended the Cheff Therapeutic Riding Center in Battle Creek, MI, the first large operating center for therapeutic riding in the country. There she would learn about the mechanics of therapeutic riding, physical therapy, and expand on her on theory of therapeutic riding. Here time here would also allow her to become "qualified" as a Therapeutic Riding Instructor.

This same year, Dr. Brown was married and moved to New Jersey for her husband to work at Bell Labs in Murray Hill. Now qualified as a Therapeutic Riding Instructor, she was interested in creating a

program of her own. Horses, ponies, and a venue in Bedminster, were supplied by the Somerset Hills Pony Club; volunteers were recruited through the local paper and word of mouth; and the Somerset Hills Handicapped Riding Center (SHHRC) was created.

In 1974 the group moved to Crossroads Farm in Bedminster, and in 1993 SHHRC moved for its final time to Oldwick, New Jersey; and sometime after that the board decided to change its name to Mane Stream, "since it was no longer in Somerset County, and a shorter name seemed a good idea!" quipped Dr. Brown.

Dr. Brown would change paths again in 1997, when approached by Centenary University to join their staff with a full-time position in the Equine Studies Department. "Centenary students had been coming to me individually for training as instructors for some time, and Centenary decided they wanted to bring the training into the equine studies degree programs," said Dr. Brown. "I was hired to create a one-year training program and to work with equine studies alumni to increase interest and funding for the department as a whole."

Leaving SHHRC in the "good hands" of leadership to build its current facility in Oldwick, and the center's program, Dr. Brown would take on her next adventure.

Internships were arranged with Mane Stream for hands on teaching, until 2003 when Dr. Brown created the Therapeutic Riding at Centenary (TRAC) program to run on-site at Centenary as the practicum for future Therapeutic Riding Instructors. To date TRAC has graduated more than 100 instructors with PATH at the Certified Therapeutic Riding Instructor level; and 11 at the Advanced level. Graduates now work all over the country and are eagerly sought for employment due to the high level of certification that they receive upon graduation.

In 2008, Dr. Brown was awarded a Doctorate of Humane Letters by Centenary University for all of her accomplishments, not only at the university, but throughout the country and worldwide.

"Being involved with EAS (Equine Assisted



Dr. Octavia Brown joined by staff and representatives from Centenary University, at the presentation of the 2023 “Spirit of the Horse” award. (Pictured from left to right: Dr. Lynn Taylor; Karen Brittle; Dr. Octavia Brown; MAJ George W. Paffendorf, USA (Ret.); and Dr. Kelly Munz.)

Services) has completely changed the lives of several people with disabilities I have known over the years,” said Dr. Brown. “It shows the power of the horse to open the door to trying things never dreamed of because of the disability involved: e.g. becoming a board member of NARHA/PATH; competing internationally; becoming a horse show judge; becoming an instructor; mentoring instructors in training. As the song says,” she recites while thinking of horses, “you lift me up when I am on your shoulders: you lift me up to more than I can be.”

Dr. Brown taught at Centenary for over 20 years, and retired in 2019 from teaching (even still remaining engaged in the TRAC program. She has left a legacy there that everyone from the students to instructors remember. In those same 20 years she remained engaged in the national and international programs that she loved, volunteering, serving in leadership, and giving talks and workshops.

When asked about the challenges that she has faced over the years, she doesn’t think about building programs from the ground up, being at the forefront of an entire field of study and practice,

rather she thinks about fundraising. “My biggest challenge is always fundraising – I’m not very good at asking for money, I’m great at the inspiration part,” she jokes.

Her rewards have been plentiful though. In addition to the Spirit of the Horse award, which was presented to her by the Rutgers Equine Science Center this past fall, she has been honored with the 1982 New Jersey Horse Person of the Year by the New Jersey Equine Advisory Board; the 1998 James Brady Award for Lifetime Achievement in Therapeutic Riding from PATH International; the 2022 Humanitarian of the Year Award from the Equus Foundation; and the Golden Dome Award from Centenary University.

These aren’t the things that immediately come to mind for her though, her reward has been “working with the participants, volunteers, horses and ponies, instructors in training, not to mention board members and colleagues all over the world,” she states. “What more could one possibly ask for in a lifetime’s work? Happily retired now, I’m still involved as a volunteer and expect to be so as long as I possibly can.”

The 2022 Evening of Science & Celebration

The Rutgers Equine Science Center hosted the 30th annual “Evening of Science and Celebration” on November 2, 2022.

After hosting the event virtually for the last two years, the Center was excited to have the event back on campus, with a room full of excited attendees.

Following dinner, the keynote address was given by Dr. Frank Andrews from Louisiana State University. Dr. Andrews presented “Dietary Management of Gastric Ulcers in Horses.” His talk focused on risk factors, clinical signs, and how stomach ulcers can be diagnosed.

Research updates were provided by Ph.D. Candidate Ellen Rankins, from the Rutgers Endocrinology and Animal Biosciences Program, presenting on her research into “Co-regulation Between Horse and Human in Equine Assisted Activities (EAA) and its Effects on Symptoms of Post-traumatic Stress Disorder (PTSD) in Veterans”.

Dr. Kenneth McKeever; Associate Director of Research, Rutgers Equine Science Center, and Professor in the Department of Animal Sciences; presented his research into “Effect of Nasal Flairs on Thermoregulation During Exercise”. Dr. Daniel Gimenez, Professor in the Department of Environmental Sciences, presented his research into “Effects of Horse Manure-Sourced Biochar on Soil Nutrients, Carbon Sequestration and Hydraulic Properties of Agricultural Soils”.

The evening concluded with the presentation of the “Spirit of the Horse” and “Gold Medal Horse Farm” awards. Dr. Octavia Brown, Emeritus Professor of Equine Studies at Centenary University, was awarded the 2023 “Spirit of the

Horse” award; and the 2022 winner of the “Gold Metal Horse Farm” award was Stoneleigh Stables of Branchburg, NJ, owned by Chrisie and Chris Van Cleef.

The Spirit of the Horse award recognizes individuals whose lives have been profoundly changed because of their involvement with horses and who have acknowledged the impact by giving back to the horse industry.

“Dr. Octavia Brown has been a stalwart supporter of the equine community in New Jersey and was an instrumental organizer and founder of multiple equine programs and initiatives throughout the state”, said Equine Science Center Director, Dr. Karyn Malinowski. “Tave is truly worthy of the ‘Spirit of the Horse’ award, as evidenced by her long-time commitment to the advancement of Equine Assisted Services nationwide.”

The Gold Medal Horse Farm award, part of the New Jersey Equine Environmental Stewardship Program, gives recognition to outstanding equine farms for their dedication to environmental sustainability and management. Stoneleigh Stables is located on 23 acres in the heart of New Jersey horse country. It currently features an outdoor riding arena, multiple grazing paddocks with run-in sheds, and well-managed cool-season pastures. The property’s restored two-story barn includes spacious horse stalls and a heated tack room and indoor wash stalls.

Overall a great success with its first year back on campus, the Center is already looking forward to the next Evening of Science and Celebration with all of the exciting research coming up. Be sure to join us next year to hear all about it!



To see more of the pictures from the event, please go to: <https://go.rutgers.edu/2022ESCPics>



Back by popular demand...

Rutgers VIRTUAL Horse Management Seminar

2023 Nutrition Edition

Wednesdays @ 6:30 - 8:30 PM

Feb. 8 - Supplements

Feb. 15 - Nutritionally Related Disorders

Feb. 22 - Pasture/Forage

Topics Include:

- Omega-3's & anti-inflammatory supplements
- Ulcer supplements
- Nutritional regulation of muscle mass
- Antioxidants
- Problems with grazing horses
- Weight loss strategies for

Speakers From:

- University of Maryland
- University of Georgia
- University of Kentucky
- North Carolina State
- Louisiana

Back by popular demand, the Horse Management Seminar has gone Virtual! (Meaning even more of you can join!)

Lab Notes - Dr. Williams

From The Lab:

Join Dr. Williams as she hosts the Virtual Horse Management Seminar, taking place throughout the month of February.



THE TOP TAKE-A-WAYS

(Continued On Next Page)

Dr. Frank Andrews

Research Driven Supplements: Ulcer Supplements Panelist

- Stomach ulcers are common in horses and supplements help maintain stomach health in active horses
- Supplements should not be used to treat stomach ulcers. Initial treatment should consist of pharmacologic agents to heal the ulcers.
- Choose supplements from reputable companies (brand recognition), and ulcer supplements that have reported safety and efficacy research data.
- Results from feeding ulcer supplements are not immediate and might take up to a month or more to be effective.

The Rutgers' Horse Management Seminar is back virtually by popular demand, but this year is going to focus on the most popular topic requested from past years – Nutrition!

We will keep the format the same FREE online format as the past few years to help serve our national and even global audience. The seminar will consist of three Wednesday evenings in Feb. (8th, 15th, and 22nd).

Each virtual seminar evening will feature two to three speakers that we have done recent work in their field to give you the latest and greatest practical scientific information. Each evening will focus on a broad topic area with plenty of time for questions after the speaker presentations.

The weekly webinars will run from 6:30 to 8:30 PM, and you can register for one or for all three! The webinars will be free to our audience. However, to facilitate a more engaged live audience with our speakers, we will not be posting the archived webinars immediately after the program.

Please see the registration information at: <https://go.rutgers.edu/2023HMS>.

For questions, please contact Dr. Carey Williams at carey.williams@rutgers.edu.

Webinar Topics Include:

February 8th

Research Based Supplement for Horses

A panel of speakers from unbiased universities that are performing the research themselves on various classes of ulcers will explain their research and be there to answer any of your questions on ulcer supplements, antioxidants and joint supplements, and omega-3's and anti-inflammatory supplements.

February 15th

Nutritionally Related Disorders

These speakers will cover areas including nutritional problems and regulation of muscle mass, and issues with having certain horses on pasture.

February 22nd

All Forage Diets

The last group of speakers will cover a lot of areas surrounding horses on pasture and all forage diets. More specifically some subtopics will include weight loss strategies for overweight horses kept on pasture and making sure an all-forage diet is balanced, also the proper use of alfalfa for horses.

Dr. Wendy Pearson

Research Driven Supplements: Antioxidants & Joint Supplements Panelist

- Arthritis results from an accumulation of exercise- and age-related damage.
- Joint care products are the most common of all nutritional supplements and most have no research behind them.
- Some studies show excellent potential for joint care products to slow down clinical signs and progression of arthritis.

Dr. Sarah White-Springer

Research Driven Supplements: Omega-3, Anti-inflammatory Panelist

- Not all omega-3's are created equal.
- Limited data supporting anti-inflammatory effects of omega 3's in exercising horses.
- Improved sample analysis techniques provide promising preliminary evidence of anti-inflammatory impacts of new combination supplements.

Continued Take-A-Ways

Dr. Kristine Urschel

"Nutritional Regulation Of Muscle Mass"

- Protein is the major non-water component of skeletal muscle and so muscle mass is ultimately determined by the balance between rates of muscle protein synthesis and muscle protein degradation.
- Rates of muscle protein synthesis can be influenced by many factors, including age, feeding, exercise and disease.
- As horse owners, riders or managers, having knowledge of the factors that regulate muscle protein synthesis will improve our ability to optimize muscle growth and maintenance.

Dr. Amanda Grev

"Alfalfa: When Is It The Right Choice For Horses?"

- The horse industry is full of misconceptions about alfalfa.
- Alfalfa can be a good forage source for certain classes of horses, particularly those requiring a high plane of nutrition.
- Alfalfa can be grazed or fed as hay, and different types of alfalfa exist within the industry.

Dr. Shannon Pratt-Phillips

"Potential Issues With Horses On Pasture"

- Pasture can be a very economical source of nutrition for your horses, if it is managed properly.
- Excessive pasture intake can contribute to obesity and/or laminitis in some horses.
- In cases where pasture intake should be limited - using grazing muzzles or limiting the size of the pasture or time of access may be effective.
- It may be difficult to allow overweight horses or those at risk of laminitis any access to pasture.
- Weight management in horses usually requires careful weighing of all feed, and increased exercise when possible.

Dr. Amy Burk

"Weight Loss Strategies And Management Of Horses On Pasture, And All Forage Diets"

- Obesity is a serious health and welfare problem.
- Horses at or above the body condition score of 7 are at risk for obesity-related metabolic disorders.
- Designing a weight loss plan with your veterinarian is key to successful weight loss in horses.
- Strategies to encourage weight loss for pasture-kept and all forage-fed horses include calorie restriction, increasing exercise, and using grazing muzzles and slow-feeders.

The Virtual Horse Management Seminar Program:

February 8th - Research Driven Supplements Panel:

**Dr. Frank Andrews, Louisiana State University -
Panelist focusing on Ulcer Supplements**

**Dr. Wendy Pearson, University of Guelph -
Panelist focusing on Antioxidant & Joint Supplements**

**Dr. Sarah White-Springer, Texas A&M -
Panelist focusing on Omega-3, Anti-inflammatory**

February 15th - Nutritionally Related Disorders:

**"Nutritional Regulation Of Muscle Mass"
By: Dr. Kristine Urschel, University of Kentucky**

**"Potential Issues With Horses On Pasture"
By: Dr. Shannon Pratt-Phillips, North Carolina State**

Nutritionally Related Disorders "Ask The Experts" Panel

February 22nd - All Forage Diets:

**"Alfalfa: When Is It The Right Choice For Horses?"
By: Dr. Amanda Grev, University Of Maryland**

**"Weight Loss Strategies And Management Of Horses On Pasture, And All Forage Diets"
By: Dr. Amy Burk, University of Maryland**

All Forage Diets "Ask The Experts" Panel

To register and learn more, please go to: <https://go.rutgers.edu/2023HMS>

Back by popular demand...

Rutgers **VIRTUAL** Horse Management Seminar

2023 Nutrition Edition

Series of 3 evening
webinars,
join 1 or all 3!

Wednesdays @ 6:30 - 8:30 PM

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Supplements**

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Topics Include:

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Omega-3's &
anti-inflammatory
supplements

Nutritional regulation of
muscle mass

Antioxidants

Problems
with grazing
horses

Weight loss
strategies for
pastured
horses



Speakers From:

University of
Maryland

University of
Guelph

University of
Kentucky

North Carolina
State

Louisiana
State

Texas A&M

For a full program and
registration details:

ESC.Rutgers.edu

Under "What's New"



RUTGERS



Equine Science Center
Better Horsecare through
Research and Education



THE EQUINE SCIENCE CENTER PRESENTS THE



2023 New Jersey Equine Industry Summit

Thursday, March 16th, 2023
10:00am to 3:00pm

**Keynote By Dr. Jill Stowe
From The University Of Kentucky**

**"Economic Analysis Of Equine Operations:
Tips For Reducing Costs For Horse & Horse Farm Owners"**

Program Highlights:

Panel Discussion on the State of the U.S. Racing Industry With:
Jim Gagliano - President of the Jockey Club
Mike Tanner - Executive Director of the U.S. Trotting Association

Lunch

Breakout Sessions:
The Future of Racing, Equine Health & Well-Being,
Land Use & Policy Management, Integrity of Equestrian Sport,
Economic Growth & Industry Sustainability, and Environmental Stewardship

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 pinterest.com/RutgersESC



RUTGERS

New Jersey Agricultural
Experiment Station

Event is completely free and open to the public.
Please register at: go.rutgers.edu/2023NJEquineIS
Hosted at the Cook Student Center
59 Biel Road - New Brunswick, NJ 08901

CHASING HER DREAM JOB

**The Journey of
Post-Doctoral
Associate Dr.
Alisa Herbst**



Join us as we sit down for a conversation with Dr. Alisa Herbst. Dr. Herbst joined the Rutgers Equine Science Center team on July 1, 2022; after receiving her BS degree in Equine Management from the Nuertingen-Geislingen University in Germany in 2016, and her Ph.D. in Veterinary Science from the University of Kentucky in 2021.

Dr. Herbst focused her doctoral research on muscle mass and immune function in the senior horse and developed and tested a visual and palpation-based muscle atrophy scoring system for horses.

The Rutgers Equine Science Center (The Center):

Please provide us with some of your background, i.e. where you grew up, attended school, etc.?

Dr. Alisa Herbst (Dr. Herbst): I grew up in a small rural town called “Bitz”, which is located on a mountain range (Swabian Alps) in southern Germany. There is a little ski lift right behind our house and you can also see the Quarter Horse breeding and training farm of an internationally successful equestrian (Grischa Ludwig), which is only a few kilometers away. There is a lot of agriculture around Bitz, including many horse pastures and barns.

I attended high school not far away in a city called “Ebingen”, and later on college at Nuertingen-Geislingen University in Nuertingen, which was a little further away from my hometown, but still in southern Germany.

The Center: What is your first memory of interacting with horses, or reason that you became interested in horses?

Dr. Herbst: I have always loved animals in general, but there was something about horses in particular... - I can't even tell exactly what it was/is. Ever since I was little, I wanted to see horses and interact with them, but that wasn't easy since my parents are both allergic.

My first memory with a horse was a pony ride at some event, and I don't think it was easy to get me away again from this place, haha. Once I was old enough, my parents dropped me off at a local riding school once a week, and that was really the highlight of the whole week for me.

The Center: Tell us about your time at Nuertingen-Geislingen University, Purdue University, and Massey University.

Dr. Herbst: I loved studying at Nuertingen Geislingen University. Every class was somehow



Even at a young age, it was abundantly clear that Dr. Alisa Herbst was a horse enthusiast.

horse-related, and everyone there (students and professors) was a horse enthusiast. While I originally attended college to become a barn manager, I quickly fell in love with the academic environment, and wondered if a job at a university wouldn't be a better career path for me.

To explore this, I completed a research internship at the Equine Sports Medicine Center (College of Veterinary Medicine) at Purdue University in Indiana – and I loved every second of this internship.

I even ended up applying to vet school in Germany, as I had so much fun working at the college of veterinary medicine, but ended up declining my spot, once I realized that I might be able to work/teach at vet schools with a research degree. Hence, a Ph.D. was my next goal.

To gain some more research experience, I had the opportunity to complete my bachelor thesis at Massey University in New Zealand. I worked on a project aiming to reduce Standardbred wastage in the racing industry, and through this project I learned a great deal about designing and



Dr. Herbst working in the lab at the Gluck Equine Research Center, a part of the University of Kentucky.

conducting research studies.

Next, I started a master's degree in Animal Science at the University of Copenhagen in Denmark. There, I completed a licensing program for rodent handling in research and was first introduced to bioinformatics, which I loved. After a year in the program, I had the opportunity to switch to the Ph.D. program at the Gluck Equine Research Center- A long standing dream of mine. I still remember how extremely excited I was when I got accepted into this program!

At Gluck, I trained under Dr. Amanda Adams, a renown equine immunologist. My dissertation research comprised projects like the creation of a muscle atrophy scoring system (MASS) for horses and further characterization of changes in the equine immune system during aging.

The Center: Expand on your time at the Gluck Equine Research Center.

Dr. Herbst: It's difficult to single out the best memory or most enlightening experience, as there were so many great memories and enlightening situations. Most of my best memories are related to times spent with my colleagues and undergraduate and graduate mentees.

Also, for one of my projects, we had to

train adult unbroken horses to lunge, and this has certainly become an unforgettable memory as well. Let's just say: things did not always go according to plan, haha. Conducting research at our research farms has generally led to some great memories.

I never thought I could become a doctor. In fact, I was the first in my family to attend college. So, it's sometimes still hard for me to grasp that I have achieved this milestone and have come one step closer to my crazy dream of becoming a university professor.

The Center: What made you come to Rutgers and the Equine Science Center? How does this fit into your overall career path?

Dr. Herbst: My shorter-term career goals are to conduct research projects that build upon the findings of my dissertation research: I hope to further characterize the aging equine immune system, study pathways underlying changes in muscle mass, and to validate our muscle atrophy scoring system in depth.

As my time at the Purdue Equine Sports Medicine Center kindled my interest in exercise physiology, I also hope to conduct studies in this area.

Like the Gluck Center, the Rutgers Equine Science Center is renowned for its excellent researchers, and the impactful studies it conducts. Furthermore, in line with my personal short-term research goals, the Center conducts research specifically on aging horses, muscle, and exercise physiology.

Therefore, I felt like the Center was an excellent fit for my post doc research, and I feel very honored to get to learn from world renowned scientists who are experts in these areas.

My overall career goal/dream is to become a professor for equine science and, in this capacity, to advance 1.) equine science through high quality research, 2.) academic equine education through interactive lectures and student mentoring, and 3.) to improve equine health and well-being though

applicable practical research, innovation, and outreach.

These goals are very much in line with the mission of the Animal Science Department at Rutgers, and of the Rutgers Equine Science Center as well. Thus, I believe that this is a great place for me to be.

The Center: Tell us something about the exciting work that you are doing now.

Dr. Herbst: I have been helping with some very exciting work during my time here. I helped Ph.D. Candidate Ellen collect samples for her equine assisted activities dissertation project. Through her research I got to learn more about equine assisted activities, an area that I had not been exposed to much before, and that I am absolutely fascinated by.

I also conducted a national survey to identify issues that are important to members of the equine industry. I will be presenting the exciting results of this survey at this year's equine summit. I further applied for funding for two projects to start in 2023.

If they are funded, I will soon be working on an in depth validation of the equine muscle atrophy scoring system (MASS) that I developed as part of my dissertation, and I will study the effects of exercise on immune aging in horses. The latter project would involve additional bioinformatics training for me as part of a fellowship, which I am very excited about.

The Center: Overall how have horses impacted your life?

Dr. Herbst: In some capacity, I now work with or for horses every day, and I feel like the quote "Find a job you enjoy doing, and you will never have to work a day in your life," somehow really applies to me.

Through horses and equine research, I have gotten to know the most amazing people, and I



Dr. Herbst pictured with one of the many horses from Ph.D. Candidate Ellen Rankin's research project.

got to travel and experience other countries and cultures. The opportunities I had through horses have positively impacted my life in so many ways.

The Center: What have been the biggest challenges and rewards so far in your life?

Dr. Herbst: I think one of my biggest challenges is one that many international students and scholars face: To be pretty far away from your home country, family, and the friends you grew up with.

My biggest rewards were to be selected as a mentor for a master's thesis, to be accepted into the Ph.D. program at Gluck, and to now hold a postdoc position at the Center.

Some smaller rewards were grants and awards I received during my Ph.D. and undergraduate studies, such as the Germany stipend for ranking among the best students of Nuertingen-Geislingen University, and the Richard Graduate Student Award at the University of Kentucky, to support my research on equine immune aging.

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