



Louisiana
State
University

School of
Veterinary
Medicine

Equine
Health
Studies
Program

*Dedicated to the
Health, Well-Being and
Performance of Horses
through Veterinary Research,
Education and Service*

Winter 2003

Biotechnology Grant Enhances Studies of Equine Lameness and Musculoskeletal Disease

The LSU School of Veterinary Medicine (SVM) was awarded in October four of the 16 grants funded by the Louisiana Board of Regents to implement Gov. Mike Foster's Biotechnology Initiative. One of the four grants was awarded to Dr. Rustin M. Moore, project director and director of the Equine Health Studies Program (EHSP), and his co-investigators to expand their scientific investigation of horse lameness and orthopedic/musculoskeletal disease.

The title of the project is, "Molecular, hemodynamic, pharmacological and epidemiological approaches to lameness and poor athletic performance in horses: biomedical and technologic initiatives to strengthen Louisiana's equine industry and enhance the state's economy."

Focus group team leaders include Drs. C.S. Venugopal, Susan Eades, Jill Blackmer, Daniel Burba, Rebecca McConnic, David

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Hines' Gift to Name Equine ICU Stall in Honor of Daughter's Horse



(r to l): Dr. Rustin M. Moore recently visited Jeanne M. Hines to thank her for her \$50,000 charitable gift to name an Equine ICU stall in honor of her daughter, Sydney, her granddaughter, Jeanne, and Sydney's horse, Blue. Blue was successfully treated for an injury and infection at the LSU School of Veterinary Medicine's Equine Unit.

Ms. Jeanne M. Hines of Pass Christian, Miss., has given a \$50,000 charitable gift to name a stall in the new Equine Intensive Care Unit in honor of her daughter's horse.

The stall will be named in honor of So Blue Riva, or "Blue"

for short, a 1994 gray appendix Quarter Horse mare owned by Jeanne's daughter, Sydney L. Hines, also from Pass Christian. Blue was successfully treated at the LSU Equine Clinic nearly three years ago and overcame a severe,

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Director's Message

Greetings from the Equine Health Studies Program (EHSP)! I would like to take this opportunity to inform our readership of some of the important events and activities that have occurred since our last publication that have or will benefit the research, teaching and service aspects of our program. First, the EHSP was awarded a substantial grant from the Louisiana Governor's Biotechnology Initiative program competition (page 1). The grant allocated the EHSP \$308,000 of annual recurring funds to hire faculty scientists and other personnel to expand studies in equine lameness/musculoskeletal disease/injury and to improve the lameness and orthopedic service components of the program. The duration of the annual recurring grant is five years, at which time it can be renewed pending attainment of our goals and benchmarks. Additionally, \$167,000 was awarded as one-time capital outlay funds to help with construction and renovation of laboratory space and acquisition of state-of-the-art equipment. This grant will help us to grow and expand this aspect of our program and assist us in

reaching our goal of becoming the premier equine biomedical center in the country.

With broad-based industry support and through the dedication and assistance of state Representative Mike Strain, Mr. Charles V. Cusimano and others, we were successful in getting new monies (up to \$1 million) into the EHSP, derived from a portion of the tax revenues on slot machine gaming at Louisiana Downs into the 2002-2003 appropriations bill (House Bill No. 1). If slot machines are installed before June 30, 2003, the EHSP will realize immediate benefits from this bill. These funds are earmarked for the scientific aspects of the program to help investigate medically and economically important diseases/injuries of horses and to find more efficacious and cost effective preventive and therapeutic measures. The total economic impact of the Louisiana horse industry has been estimated to be well over \$1 billion annually. Dedicating a small portion of the taxes (up to \$1 million annually) on slot machines at the racetracks is imperative to help support this economically important industry. The next and most critically important step is to get these monies dedicated to the EHSP on an annual basis in the next legislative session. This would

enable an annual, dependable source of revenue to grow and expand our scientific investigative and clinical service efforts of the EHSP for the benefit of the horses and horse-owning population of the state and the surrounding area, and the entire Louisiana equine industry. Horse owners and trainers in Louisiana expect and deserve state-of-the-art advanced veterinary care for their horses, and our success in obtaining this source of funds will help ensure they receive these services. Every horse owner, trainer, breeder and enthusiast will benefit directly or indirectly from this EHSP funding, and we ask everyone to contact your state legislators to emphasize the importance of the equine industry to the State's economy and your support for the bill.

The EHSP's second annual Stallion Service Auction was a great success. The first round of the auction, which ran from October 1 to November 15, generated nearly \$20,000 that will go toward construction of our new Equine Intensive Care Unit. The Second Chance Sale began December 1 and continued through January 1, 2003. The auction was a success thanks to the generosity of numerous stallion owners who graciously donated stallion services for the 2003 breeding season. We thank everyone who donated services and those involved in the online Internet bidding (page 12). If you missed the Second Chance Sale, and a stallion service is still available, please contact us by e-mail (ssa@vetmed.LSU.edu) or by telephone (225-578-9500).

We invite everyone to attend and participate in the upcoming state-of-the-art Equine Health Education Series being sponsored

(Continued on next page)

Equine Health Studies Program



Dr. Rustin M. Moore	Director, Equine Health Studies Program
Dr. Michael G. Groves	Dean, School of Veterinary Medicine
Dr. Peter F. Haynes	Executive Associate Dean
Angela Vanveckhoven	Editor
Pat Edwards	Contributing Writer/Editor

Published by the Equine Health Studies Program. Correspondence should be addressed to: Equine Health Studies Program, School of Veterinary Medicine, Louisiana State University, Baton Rouge, LA 70803.

Telephone: (225) 578-9500

Email: equine@vetmed.lsu.edu

Web: www.vetmed.lsu.edu

Director's Message

by Judi Gerhardt and the Blue Moon Equestrian Center (page 7). This continuing education series involves 6 sessions with veterinary specialists from the LSU Equine Health Studies Program. This will give an excellent opportunity to obtain up-to-the-date information on many illnesses and injuries that afflict horses.

On behalf of the EHSP, I wish to personally extend our sincere gratitude to Ms. Jeanne M. Hines of Pass Christian, Miss., for the generous charitable gift she donated for construction of the new Equine Intensive Care Unit (page 1). The tremendous generosity of her and her family toward the EHSP and the School of Veterinary Medicine is truly remarkable and greatly appreciated. Attaining the goal of the EHSP becoming the premier equine biomedical center in the country is dependent upon the generosity and support of individuals and companies like Ms. Hines, and others who have given and will give in the future. We are truly indebted!

The future of the EHSP is dependent upon the support and generosity of the horse owners and trainers and other individuals and groups involved in the equine industry. We thank those individuals who have contributed to our program through donation of their time and efforts and for the monetary gifts that have been made to enhance our facilities and other aspects of our program. We invite individuals interested in assisting the EHSP with donation of their time and service or charitable monetary gifts to contact us.

Rustin M. Moore, DVM, PhD
Director, Equine Health Studies Program



There were plenty of EHSP supporters having a howling good time at "Barkin' on the Bayou," the SVM's second annual gala, held at the New Orleans Fair Grounds Race Course in November. Included in the group were (l to r) Melissa McGuffee, friend and guest of Dr. Allison Barca, Vicky Busch, Barca, Dr. Rustin Moore, Judi Gerhardt, Sydney Hines and Becky Rutledge.

Hines' Gift *(Continued from page 1)*

life-threatening injury and infection of the navicular bursa/bone of her right front foot.

One of the adult horse stalls in the climate-controlled, centralized Equine ICU will be named in honor of Blue and in recognition of Sydney and her daughter, Jeanne L. Pitre, both avid horse lovers and equestrians.

"This gift has helped us to get closer to the \$845,000 we need to break ground on this much needed facility. We are very grateful to Jeanne, Sydney and Sydney's daughter Jeanne for their overwhelming support of the equine unit and the entire school," said Dr. Rustin M. Moore, director of the Equine Health Studies Program (EHSP).

Throughout the course of Blue's stay at LSU and since that time Jeanne, Sydney and Jeanne have become great friends and

tremendous supporters of the EHSP.

Other major gifts for the Equine ICU have been given by Gerry and Faye Lane and Sandra Lane Garrett, Paula Manship, Clear Creek Stud (Jan and Val Murrell), The R.Z. Biedenbarn Foundation (Sydney Biedenbarn) and the Hubert Charitable Foundation.

With additional private charitable gifts, like the one recently given by Ms. Hines, and other fundraising events, we hope to reach our goal of \$845,000 very soon.

"This facility is much needed and its construction will enable us to more efficiently and effectively deliver state-of-the-art advanced veterinary care to the ever increasing number of critically ill and injured horses admitted to the LSU Equine Clinic," said Dr. Moore.

Preparations and Precautions Can Lessen Effects of a Horse Barn Fire

Angelica Veitch, BA,
veterinary student

Dr. Rustin Moore,
director,
Equine Health Studies Program

It was a hot July day in Louisiana when Joe Smith finished stacking the hay bales in the barn. They felt a little heavier than normal to him, but he figured they were just damp and would dry out in time. In the room under the hayloft, where he kept his lawn-mower, he noticed the gas can had leaked a little and mopped it up with an old tee-shirt, which he then threw back in the rag pile. Tired from the day's work, he smoked one last cigarette and headed for the house.

That night Joe couldn't sleep. Something was happening down by the barn. He could hear noises like the horses were fighting, or kicking. He tried to put the pillow over his head, but just then a frantic neigh made him sit up and look out the window. He caught a glimpse of flickering light. "Oh no! The barn is on fire!"

Would you know what to do next? Are you prepared in the event of an emergency in your barn? How could this have been prevented – what did Joe do wrong? You can make barn fires merely a bad dream by following some prevention guidelines:

- Do not allow smoking in or around the barn. Hay and shavings are flammable.
- Do not store gas or gas-powered equipment in the barn. Heat generated from an engine can spark a flame and ignite a fire.

- Don't put up wet or damp hay. It can generate heat, causing spontaneous combustion. When possible, hay should be stored outside the barn in a dry, covered area.

- Similarly, piles of old rags, especially those used to clean up gas or solvents, can combust.

- Have the electrical wiring checked periodically. Faulty wiring, rodent-damaged wiring or wiring near roof leaks can ignite fires.

During winter, space heaters can be dangerous. In addition to drawing a lot of current, they can melt wire casings and ignite nearby materials. Never leave a space heater on or unattended.

- Do not overload existing wiring with multiple appliances. Make sure it is up to the task of powering the fans, air conditioners, refrigerators and radios.

- During winter, space heaters can be dangerous. In addition to drawing a lot of current, they can melt wire casings and ignite nearby materials. Never leave a space heater on or unattended.

- Install smoke detectors and fire extinguishers in the barn; check that they are in working order and replace batteries on a regular basis. Fire extinguishers should be easily accessible (located at least at each entrance) and checked periodically to insure they are functioning properly. Heat sensors that detect rapidly changing temperatures in the barn and/or fire alarms should be integrated to sirens that will rapidly alert you or others of a possible fire.

- Horses should be familiar-

ized and acclimated to the activities that would occur evacuating during a barn fire, including flashlights and flashing or flickering light. Desensitizing them to these activities might help reduce anxiety and panic during a fire.

- Familiarize local emergency service personnel to the topography of your property and the layout of your barn. Providing some basic horse handling training may also be helpful to make them more comfortable and to make the evacuation process more efficient.

Sometimes, no matter what steps have been taken for prevention, things can go wrong. Even if you feel you have done everything possible to prevent fires, you should be prepared to act if a fire does occur.

- Have an evacuation route planned for every stall in the barn.
- Make sure all employees and family members are familiar with the evacuation plan.
- Practice fire drills, especially if you have a large barn, with many horses and employees.
- Time is limited in an emergency. Start your evacuation with the easiest to reach horses.
- Keep halters handy. Halter each horse and lead it out with a lead rope.
- Don't automatically blind-fold horses. It may worsen their fear and they often resist this maneuver.
- Keep aisles, stall doors and barn doors free of obstruction.
- Have a secure paddock that horses can be moved to. Don't just turn horses loose. A scared horse may try to return to the barn, where it normally feels secure.
- Keep a list of emergency phone numbers, including those of your veterinarian and employees, in

(Continued on next page)

the barn and in the house.

- Make sure the street address of your barn is posted by telephones. It is also important to make sure the street address and entrance to the barn property is readily marked so that emergency personnel can easily locate it.
- Call 911 or the fire department first. If you are alone, then call trained or knowledgeable assistants. You can't get a barn full of panicked horses to safety by yourself.
- Do not enter a barn that is engulfed in flames.
- Have a relationship with your local veterinary school or animal hospital, and know who can accommodate a large number of horses.
- Have a veterinarian check all horses that have been through a barn fire. Even horses that do not appear injured can have lung damage from smoke inhalation,

which can lead to respiratory problems and death.

- Make sure horses are trailer-trained for quick evacuation.
- Keep records, equine infectious anemia (Coggins) papers and other important papers in a secure place. These documents should also be stored in a water-proof container.
- Have a first aid kit available. Consult your veterinarian on what to include in a first aid kit.
- Horses should be accustomed to trailering to facilitate evacuation. If you do not have a trailer, arrangements should be made in advance with friends or neighbors that can trailer your horses in an emergency situation.
- An adequate supply of water, hay, feed and medications should be available for several days for each horse that might need to be evacuated.

- But remember, not all injuries are readily apparent. Have your horses examined by your veterinarian.

If your horse is caught in a barn fire, it can sustain smoke inhalation injury and/or skin burns, both of which can be life threatening. It is important to have your veterinarian examine and initiate necessary treatment immediately. Often times, horses that sustain lung and skin injury secondary to a fire require advanced intensive medical care, which often requires transport to a referral hospital. It is important that you become familiar with the location of the nearest referral hospital where your horse can be administered state-of-the-art advanced veterinary services. It is also important for you to establish a relationship with a local veterinarian to provide your horse's primary veterinary care.

Awards and Honors

Dr. Lais R. R. Costa, an advanced studies student in the Equine Health Studies Program, accepted the Joan O'Brien Award for the outstanding poster presentation at the 20th Veterinary Comparative Respiratory Society Symposium, held in Boston in October. The poster was entitled, "Culture of primary epithelial and transformed equine airway cells under air-liquid interface," and was co-authored by Drs. Robert E. Truax, William G. Henk, Jill McClure Blackmer, Kathy L. O'Reilly and Rustin M. Moore.

Dr. Joanne Tetens, former emergency equine surgeon in the SVM Department of Veterinary Clinical Sciences and Ph.D. student in the Department of Comparative Biomedical Sciences,

was recognized as the 2001-2002 winner of the LSU Alumni Association Distinguished Dissertation Award in Science, Engineering and Technology. She was recognized for her dissertation, "Systemic and Colonic Hemodynamic and Vasomotor Responses to Adenosine Triphosphate in Horses." Dr. Tetens currently practices equine surgery at a private practice in Vermont.

Congratulations to **Ms. Veni Harlan**, editor, and the other editorial staff and contributors to **Off Course**, the newsletter of the Southern Eventing & Dressage Association. **Off Course** was selected as the best newsletter in its division by the United States



(l to r): Dr. Joanne Tetens, Dr. Kevin Smith, vice chancellor for research and dean of the graduate school, and Dr. Rustin Moore at the ceremony to honor Dr. Tetens' award-winning dissertation.

Dressage Federation. Additionally, **Dr. Jeremy D. Hubert's** article on equine anhidrosis was selected as the best original/general interest/information article. Awards were presented at the annual convention in December in Portland, Ore. Portions of the article will be reprinted in the *USDF Connection* and its author will receive a crystal trophy.

Birthday Party Benefits Equine Health Studies Program

Judi Gerhardt of Covington, La., celebrated her 50th birthday on September 21 at Blue Moon Equestrian Center with her husband, Mr. Victor Labat, and numerous other friends and family. The celebration included socializing, viewing photos of Judi throughout her five decades of active life, laughter, sampling tasty cuisine and dancing to the tunes of “Wet Willie” in a special reunion performance by these Capricorn Records artists from Mobile, Alabama.

Judi, an avid equestrian and owner and operator of Blue Moon Equestrian Center, is a great friend and supporter of the EHSP. She has been instrumental in many EHSP activities, including helping to launch the Stallion Service Auction. As another indication of

her unselfish nature and generosity, she asked that guests not bring gifts but that, if anyone felt compelled, that a gift be made to the LSU Equine Health Studies Program. The EHSP received over \$2,500 from this lovely event, which was put toward the Equine ICU construction fund.

In celebration of a half a century of life and in honor and recognition of her generosity, contribution and support, the EHSP commissioned a poet and author from Baton Rouge, Louisiana to write a poem for her. Mr. Jerald P. Broussard penned “My Life...In Shades of Blue” based on background information provided to



Dr. Rustin M. Moore (right) presents Judi Gerhardt with a poem commissioned for her 50th birthday by the EHSP.

him by a few of Judi’s friends. For those of you who know Judi, the poem is especially apropos. The poem, appropriately matted and framed in blue, was then presented to Judi on stage during a break in the band’s performance.

My Life...In Shades of Blue (Ma Vie...dans les nuances de bleus)

To live a life, a life in blue.
Wild child to flower child.
A surrogate mother,
Peaceful and mild.
In gleeful showers of periwinkle
She has danced.

Wrapped in royal cerulean and turquoise garb
She has loved like cobalt storms upon the Champs-Elysees.
Là, le vrai amour a regardé fixement dans son âme
comme des feux de Volga chauds.
(There, true love peered deep into her sapphire soul,
like warm Volga fires.)

She lies courageously upon her cyan moon
In the somnolence of her pain.

And courage she portrays upon an indigo sea
As throngs of teal waves whirl about her delicate beauty.
She is lifted up to the azure place of her reign.
There, she harbors a tender foal seeking her endless,
cisaal love.

She invites those near to her:
Dans les nuances de ma passion; dans les nuances
de ma vie ... dans bleu.

(To share in the shades of my passion;
share in the shades of my life...in blue).

Charitable gifts to the EHSP on behalf of Judi Gerhardt’s 50th Birthday

C. Llado Baquet	Ms. Jane C. MacElree
Lucien & Gloria	Mr. & Mrs. Nolan
Barbarin	Marshall
Mr. Larry & Dr. Allison	Mr. & Mrs. Alden
Barca	McDonald
Mr. Fred E. Bass	Dr. Rustin M. Moore
Dr. & Mrs. Eric Busch	Ms. Ginger S. Morvant
Adolph & Naydja Bynum	Shelton & Quinny
Ms. Lois C. Cherrie	Nuttall
Mr. & Mrs. Jim Conerly	Ms. Nancy G. Orrock
Ms. Beverly B. D’Herete	Craig & Greta Peterson
Mr. & Mrs. Lloyd Dupre	Ms. Carol Petranek
Mr. & Mrs. Stephen M.	Mr. & Mrs. Percy Pierre
Ecton	Dr. & Mrs. John R. Pleune
Ms. Patricia D. Edwards	Ms. Jane E. Reale and
Ms. Gwen Fairchild	Mr. Gordon G. Duckett
Mr. & Mrs. George Falk	Mr. Frederic Regenstein
Dr. Laura L. Freeman	Dr. Alvin J. Richard
Mark & Florence Ganier	Mrs. Francie Stirling
Michael & Loni Gaudet	Mrs. Mary Tara
Ms. Erica Geldersma	Mr. Anthony J. Tasso, Jr.
Paul & Shelia Gerhardt	Larry & Margo
Ms. Debbie Gordon	Trollinger
Scott & Suzanne Hassler	Dr. Glen C. Warren
Jeffrey & Pamela Kent	Mr. Arthur H. Yancey II



EQUINE HEALTH EDUCATION SERIES

Organized and Sponsored by Blue Moon Equestrian Center
Speakers from the LSU Equine Health Studies Program



PRESENTERS:

Dr. Rustin M. Moore – Professor, Equine Surgery & Director EHSP
Dr. Daniel J. Burba – Associate Prof. Equine Surgery
Dr. Jeremy D. Hubert – Assistant Professor, Equine Surgery
Dr. H. Ame Walesby – Assistant Professor, Equine Surgery
Dr. Markus Wilke – Visiting Assistant Prof. Equine Surgery
Dr. Jill M. Blackmer – Prof. Equine Internal Medicine
Dr. Lais R. R. Costa – Doctoral Student & Internal Medicine Clinician
Dr. Rebecca S. McConnico – Assistant Professor, Equine Internal Medicine
Dr. Ashley Stokes Holm – Doctoral Student
Dr. Dale L. Paccamonti – Professor, Theriogenology (reproduction)
Dr. Bruce E. Eilts – Professor, Theriogenology
Dr. Sara K. Lyle – Clinical Instructor, Theriogenology
Dr. Dennis D. French – Professor, Equine Field Service

Tuesday, January 14, 2003 – 6:00 pm to 9:00 pm

Equine Emergency & Critical Care (Dr. Moore)
Colic (Dr. Moore)
Equine First Aid (Dr. Burba)
Nuclear Scintigraphy (Dr. Burba)
Extracorporeal Shockwave Therapy (Dr. Burba)



Tuesday, January 28, 2003 – 6:00 pm to 9:00 pm

Infectious disease update (Dr. McConnico)
- West Nile
- Equine Encephalitis
- Herpes
- Influenza
- Rhodococcus Equi
- Equine Infectious Anemia
Equine Endocrine Disease (Dr. McConnico)
Gastric & Colic Ulceration: NSASIDs (Dr. McConnico)



Tuesday, February 11, 2003 – 6:00 pm to 9:00 pm

Respiratory noises & poor performance (Dr. Hubert)
Upper respiratory tract disease (Dr. Hubert)
Summer pasture-associated obstructive pulmonary disease - Heaves (Dr. Costa)
Evaluation & care of the newborn foal (Dr. Costa)
Why does my horse not sweat? - (Dr. Hubert)



Tuesday, February 25, 2003 – 6:00 pm to 9:00 pm

Reproduction topics (Drs. Paccamonti, Eilts, Lyle)
- Estrus suppression in performance mares
- Use of milk electrolytes to predict foaling
- Breeding with fresh cooled & frozen semen
- Breeding the difficult mare:
- Assisted reproductive techniques
Genetics & coat color in horses (Dr. Blackmer)



Tuesday, March 11, 2003 – 6:00 pm to 9:00 pm

Lameness Evaluation (Dr. Wilke)
Tendon/Ligament injuries (Dr. Wilke)
Foot Balance – (Dr. Walesby)
Joint Supplements (Dr. Walesby)



Tuesday, March 18, 2003 – 6:00 pm to 9:00 pm

Parasitology (Dr. French)
Laminitis (Dr. Holm)
Equine Dentistry (Dr. Walesby)
Prepurchase examination (Dr. Walesby)
What's new in the LSU-Equine Health Studies Program (Dr. Moore)

The Equine Health Education Series is a non-discipline, non-breed specific learning opportunity. A percentage of the program proceeds will benefit the LSU Equine Health Studies Program.

Location:

The Series will take place in the heart of Covington at the Greater Covington Center in the large auditorium. There is ample lighted parking. See directions below.

Times:

Each session will begin at 6:00 p.m. Refreshments (free coffee, hot tea, hot chocolate, water and some sweets) will be available in the lobby and there will be a 30-minute break between 7:00 – 7:30. The sessions will end by 9:00 p.m.

Fees for the program:

\$150.00 for program package.
This includes all 6 sessions; a titled binder to hold all materials provided during the series; reserved seating; set of Series videos; certificate of attendance; end of Series social gathering.

\$30.00 for single session attendance, includes materials distributed during the session.

\$50.00 set of videos
(includes six 2-hour tapes of entire series).

Registration:

To register, or for more information, contact
Judi Gerhardt,

Blue Moon Equestrian Center:

Office: (985) 893-4500

Fax: (985) 893-4530

E-mail: Jgerha3194@AOL.com

Address: 82136 Highway 437

Covington, LA 70435

Directions:

From New Orleans: Cross the Causeway, follow Hwy. 190 to Covington; before Bogue Falaya bridge, turn left at light into Covington, left onto Boston St. Go to N. Jefferson St., turn right, Center about 1 block from light on left.

From Baton Rouge: I-12 east to Exit 59 (LA 21), exit and turn left toward Covington – will be on S. Tyler St. go to W. 21st Ave., turn right, go 6 blocks to N. Jefferson turn left, Center about 1 block from light on left.

From Slidell & Points East: 1-12 W. to exit 63B, follow directions from New Orleans on Hwy 190.



Equine Projects Highlighted During Phi Zeta Research Emphasis Day

The annual Phi Zeta Research Emphasis Day was held in September and was highlighted by the poster displays of research projects, including 26 from equine students and faculty.

The day began with the first featured speaker, Dr. Cindy Besch Williford, discussing, "Career Opportunities for Veterinarians in Academia and Laboratory Animal Medicine." Williford is the associate director of the Research Animal Diagnostic and Investigative Laboratory and an associate professor at the University of Missouri's College of Veterinary Medicine.

After the poster-viewing portion of the morning, Dr. Travis McGuire presented, "Immune Control of EIAV: Predetermined Killer Cells Against Rapid Viral Mutation." Dr. McGuire is a professor of pathology at Washington State University's College of Veterinary Medicine.

Finally, Dr. Philip Elzer, associate professor of veterinary science and Phi Zeta committee member, presented first, second and third place awards to the worthy recipients.

Ashley S. Holm's presentation, "Evaluation of jugular and digital venous plasma endothelin-1 concentrations in Horses before and after Black Walnut extract administration," took first place in the Ph.D. student competition. (**A.S. Holm, S.C. Eades, R.M. Moore**)

Marilyn L. Rumbaugh took third place in the M.S., Resident, Veterinary Student and Undergraduate competition with her presentation, "The effects of intra-articular silicone polymer on synovial fluid, synovial tissue, and articular cartilage in the Equine middle carpal

joint." (**M.L. Rumbaugh, D.J. Burba, J. Tetens, J.L. Oliver, J. Williams, G. Hosgood, C.J. LeBlanc**)

Other equine-focused projects were:

Alex Baudena, M.R. Chapman, T.R. Klei: Acquired resistance to cyathostomes in ponies following experimental and natural



Dr. Daniel Burba (right) congratulates Marilyn L. Rumbaugh on her award-winning Phi Zeta poster presentation.

challenge infections.

C.M. Ramaswamy, D.B. Paulsen, C.S. Venugopal, R.M. Moore: Immunohistochemical distribution and alterations of endothelin-1 in the intestinal tract of horses in health and disease.

C.M. Ramaswamy, S.C. Eades, G.L. Hosgood, R.M. Moore, C.S. Venugopal: Identification and characterization of endothelin-1 mediated in vitro response in equine cecal longitudinal smooth muscle.

Lais R.R. Costa, R. Truax, W. Henk, J.J.M. Blackmer, K.L. O'Reilly, R.M. Moore: Culture of primary and transformed equine airway epithelial cells under air-liquid interface conditions.

Sumanth Polikepahad, R.M. Moore, S. Krishnakumar, J. Vanden Heuvel, C.S. Venugopal:

Pharmacological characterization of endothelin receptor responses of bronchi in clinically healthy horses and those affected with SPAOPD.

Darrell Dawsey, D.D. French, M. Dietrich, D.W. Horohov:

The efficacy of killed equine influenza virus vaccine versus attenuated live equine virus vaccine in geriatric horses.

Lana Gallegos, K.S. Bowles, S.S. Pourciau, R.E. Beadle, S.E. Mouch:

Antiviral properties of surfactant associated protein D in bronchoalveolar lavage fluid of young foals.

Meaghan Gilhooly, S.C. Eades, R.M. Moore: The ability of a nitroglycerine transdermal system to deliver nitric oxide to the equine digital vasculature.

Shawn Wilson, R.M. Moore, E. Dequeant, C.S. Venugopal:

In vitro characterization of bronchial response to neurokinin-A in clinically healthy horses and those with obstructive pulmonary disease.

Angelica Veitch, S.C. Eades, R.M. Moore:

The effect of insulin on blood flow and production of endothelin-1 and nitric oxide in vivo in equine digital arteries and veins.

Jennifer Liford, J.M. Blackmer, L.R.R. Costa, R. Traux, W. Henk, O. Borkhsenius, D. Paulsen:

Development of three-dimensional tissue assemblies of equine fetal tracheal cells under microgravity conditions.

Bruce E. Eilts, C.R.F. Pinto,

(Continued on next page)

D.L. Paccamonti, A.S. Niemanstverdriet, E. Garcia, R.A. Godke: Transvaginal intrafollicular sperm cell injection with concomitant artificial insemination in the cycle mare.

C.S. Venugopal, A.S. Holm, G. Hosgood, S.C. Eades, R.M. Moore: Comparison of effect of two endothelin antagonists on in vitro responses of equine palmar digital arterial and venous rings to endothelin-1 in normal horses and those with naturally acquired laminites.

C.S. Venugopal, A.S. Holm, S.C. Eades, C.E. Koch, E.P. Holmes, R.M. Moore: Effects of black walnut extract administration on in vitro responses of equine palmar digital arterial and venous rings to endothelin-1, acetylcholine and nitroglycerine.

C.S. Venugopal, S. Krishnakumar, E. Holmes, C. Koch, R.M. Moore: Endothelin A and B receptor responses in equine airways in health and disease.

Jeremy D. Hubert, T.L. Seahorn, J.L. Oliver, T.R. Klei, G. Hosgood, R.M. Moore: Alterations in histologic and immunohistochemical staining for nitric

oxide in helminth-naïve ponies infected with *Stongylus vulgaris*.

Lais R.R. Costa, S.C. Eades, R.T. Tully, C.E. Koch, G. Hosgood, R.M. Moore: Plasma magnesium and other electrolyte abnormalities in horses affected with gastrointestinal tract disease.

Rebecca McConnico, A.S. Holm, S.C. Eades, R.M. Moore: The effect of black walnut extract on equine colonic histopathology and in vitro ion transport.

Rebecca McConnico, T.R. Klei: Parasitized equine colonic epithelium exhibits an increased chloride secretory response compared to non-parasitized epithelial tissue in vitro (updated info).

A. Davidson, Rebecca McConnico, M.A. Mitchell, L. Coates-Markel: Does electrolyte supplementation increase water intake or attenuate clinical dehydration in wild horses undergoing gather stress?

A. Davidson, Rebecca McConnico, M.A. Mitchell, L. Hatcher: Does electrolyte supplementation increase water intake or attenuate clinical dehydration in wild horses undergoing shipping stress?

Rustin M. Moore, J. Tetens, G. Hosgood, S.C. Eades, M.L. Keowen, D.W. Horohov: Effects of ATP-MgCl₂ on clinical signs, hemodynamic, metabolic, hematologic, and serum biochemical variables and TNF, IL-6, and endothelin-1 in horses administered low-dose endotoxin.

Rustin M. Moore, J. Tetens, S.C. Eades, G. Hosgood, C.E. Koch, F. Garca: Cephalic venous plasma endothelin-1 concentrations and digital hemodynamic responses to ATP-MgCl₂ administration after low-dose endotoxin infusion in horses.

Susan C. Eades, C.R. Pinto, S.A. Barker, R.M. Moore: Hemodynamics and pharmacokinetics of NT-nitro L-arginine (L-NAME) after intravenous bolus administration to conscious horses.

New Faces at LSU



Dr. Markus Wilke

Dr. Markus Wilke, visiting assistant professor of equine surgery, graduated from Hannover School of Veterinary Medicine and completed a thesis in molecular microbiology before moving to England, where he spent two years in a private equine practice. He then accepted a residency in large animal surgery at Cornell University and stayed on as clinical instructor for another year. Dr. Wilke's interests are orthopedic and minimally invasive surgery, cartilage resurfacing and stem cell research. Hiking, canoeing and other outdoor activities with family and dogs are his favorite leisure activities.



Ashely S. Holm stands proudly next to her first place poster presentation.

EHSP Logo Wear

Help support the EHSP and be stylish by purchasing and wearing EHSP Logo Wear, including hats, polo shirts, tee shirts and sweat shirts. These items, available in multiple colors including navy, black, white, grey and khaki, can be purchased online at www.vetmed.LSU.edu (click on EHSP icon) or at the Equine Clinic.

Second Annual Stallion Service Auction Raises Over \$20,000 to Aid ICU Fund

The Equine Health Studies Program held its second annual multiple-breed, Internet-based Stallion Service Auction (SSA) to help fund construction of a new Equine Intensive Care Unit within the LSU Veterinary Teaching Hospital Equine Clinic. More than 180 stallion services representing over 25 different breeds were donated for the 2003 breeding season by stallion owners across the United States. The first round of the stallion service auction was held from October 1 through November 15. A second chance stallion service sale began December 1 and continued through January 1.

There were over 250 bids placed on nearly 50 of the stallion services in the first round of the auction, generating over \$20,000. The entire winning bid

on stallion services was donated to the Equine ICU fund. Bids made over regular stud fees were tax deductible for the mare owners. The donated stallion services were completely tax deductible for the regular breeding service fee, regardless of what it sold for in the auction. The farm and stallion benefited from an advertisement on the SSA web page, other Internet sites and in numerous local, regional and national equine publications.

"The Stallion Service Auction is an incredible opportunity for stallion owners to showcase and market their stallions and their farms while making a much needed and appreciated tax-deductible gift toward construction of the new Equine ICU," said Dr. Rustin Moore, EHSP director. "Additionally, this multiple-breed

auction provides a tremendous opportunity for mare owners to obtain breeding services to top quality stallions at potentially reduced fees."

The third annual SSA will begin October 1, 2003 and conclude on November 15. Persons interested in donating stallion services for the 2004 breeding season or learning more about the auction should visit the website (www.vetmed.LSU.edu and click on EHSP icon) or contact Dr. Jill Blackmer or Dr. Rustin Moore via e-mail (ssa@vetmed.LSU.edu) or by phone (225-578-9500).

The owners or farms that donated breeding services and the corresponding stallions are listed in alphabetical order by breed. To learn more about these stallions or the farms, please visit the SSA web site.

American Miniature Horse

Hidden Hollow Farms,
Bryland Farm's Heart Throb
Hidden Hollow Farms,
Mustardseeds Ramundos Firefly

American Paint Horse

MBP Management Group,
Mister Blk Pepper
BKB Farms, Bostons Happytrail
A. Girault Bird and Juanita Bird,
Dreamy Patches
X Bar 2 Farms,
Ladds Chief Dakota
Precision Training,
Zippo Vanilla Bar
Kay Ranch, Docs Jose Muneco
Sharyn Chambers,
Heza Powerful Dude
Double C Paints,
Cherokee Music Man
Double C Paints,
Super Rockin Robin

Dawn Douglas,
Mr. Sundance McCue
J & R Ranch, LLC, Fax Triple Star
Haygood Paints, A Little Gold Dust
All Star Paint Horse Ranch,
Hancock Cowboy
All Star Paint Horse Ranch,
SKM Cash Hancock
Lazy J Paints, Romeo Rascal
Lazy J Paints, Air Rascal
Platinum Paint Horses,
Impressive Proposal
Deborah D. Moore, Double O Joe
Sandy Niemczyk, Slicks Witch
Island Ridge, IRFS Fortissimo
Nonie Reed, Mr Big Heart
The BFC Ranch,
Black Eyed Scooper
Breezy J Paints & Quarters,
Hez Impresivly Dun
Diamond S Farm, Storm Tracker
Cremello Quarter Horses,
Legacy Of Gold

Cremello Quarter Horses,
Yella As I Wanna Be
George Vallot, Speeding Image

American Quarter Horse

Strawn Valley Ranch,
Smart Lil Highbrow
Strawn Valley Ranch, LenasTelesis
DSK, Ltd., Dodadash
DSK, Ltd., Wall Streak
Llanero Ridge Quarter Horses,
Jay N Steel
Steve & Andre Bergeron,
Pop A Top Pep
A. Girault Bird and Juanita Bird,
Sir San Sug
Cloughrinka Stables, Mr JB Dude
Coufal Ranch Quarter Horses and
Paints, Smokin Texas Domino
Coufal Ranch Quarter Horses and
Paints, King Sonitas

(Continued on next page)

Deshotel Farms,
Hez A Royal Dr Peppa
K Bar J Quarter Horses,
Dunnys Doin It Right
K Bar J Quarter Horses,
Cause Im Packin
Kleinpeter Quarter Horses,
Zans Diamond Joker
LS Empresa Equine Partnership,
Canby
Darrell Williams & MikeTaylor,
First Down Laveaux
Darrell Williams & MikeTaylor,
Such Easy Cash
LTC Quarter Horses & Thorough-
breds, Ramblins Boy
LTC Quarter Horses & Thorough-
breds, Zips Country Image
Reddick Ranch,
Phenomenal Cajun
The BFC Ranch,
Hesa Wee Bit Royal
Diamond S Farm, Juno Moon Lark
Steele Hart Partnership,
Lil Son Of A Dun
Everafter Ranch, How D Sliver
Keith Watson, WW Tres Hombre

American Saddlebred

Sharyn Chambers, Colortown
Sharyn Chambers, Majestic
Miracle
A Spotted Heaven, PiHA WC
Star's Fancy Pants
Winsdown Farms,
Winsdown Black Gold
Winsdown Farms,
Winsdown Celebration
Winsdown Farms,
Winsdown Hi Octane

American Shetland Pony

Everafter Ranch,
Sundance LB Hot Rod

Andalusian

Cortijo Chand, Novelisto D

Appaloosa

Counting Coup Appaloosas,
Prince DakotaWarrior

AQHA & NfqHA

Clover Valley Quarter Horses,
Jaz Mighty Mouse
Clover Valley Quarter Horses,
PococheX Shows Heart

Arabian

Heavenly Scent Meadows,
Elmarees Majeed
Cedar Hills Farm, Copiah
Fiery Run Farm, Pavvo
Rivers Edge Arabians,
GR Formal Attire
Orion's Belt, LLC, Khonig
Honeysuckle Rose North,
Khammin
Southwind Arabians,
The Apostolos
Southwind Arabians, Aspecial Ali
Melinda B. Musick, CS Khasanova
Heidi Post, Copper Charmer
Alinda Arabians, Maxwell NH
Janice Shirley, JS Mahrahja
Oak Lawn Arabians,
CT Saint Patrick
Walnut Crest Farms, El Cid JSW

Arabian/Half Arabian

Serenity Farm, Dekourated Dude

Belgian Warmblood

Laura McHale, Nicholas

Danish Warmblood

Oak Hill Ranch, Rambo

Dutch Warmblood

Centaur Farms, Ruben O
Centaur Farms, Guardian

Exmoor Pony

Varenne Burh Exmoor Ponies,
Braeford of Nonesuch

German Trakehner

Hawk's Run Trakehners,
Happy Hour

Hanoverian

San Diego Sporthorses, Madison

Holsteiner

Hilltop Farm, Inc, Hilltop Cordini

Lusitano

LS Empresa Equine Partnership,
Nervioso
LS Empresa Equine Partnership,
Romulo

Morgan

Blythwood Farm Morgans,
Blythwood Vermont Legend

National Show Horse

Laurel Arabians, Atomic Deluxe

Oldenburg

GW Ranch, Routinier
Laitin Life Farm, Laitin
Hopeful Farm Sport Horses,
Remarkable

Paso Fino

Alrena Meadows Farm,
Coral's Alejandro de Vez
Paso Fino Elegante, Oro de Piloto
Paso Fino Elegante,
Romancero de Pastoral
Rancho Texcelente IXL,
Quien Lo Ve del Ocho

Peruvian Paso

Rancho Mucho Brio, Triano
Hickory Hill Peruvian Pasos, LLC,
RyR Conquistador

Rocky Mountain/Kentucky

Mountain Saddle Horse

Shaneland Stables,
Sebastian's Mountain King

Shire

Stockton's Big Little Shires,
Big Little's Nudnick

Sport Horse

One Of A Kind Horse Ranch, Jose

Swedish Warmblood

Team Gauguin, LLC,
Gauguin du Cheval

(Continued on next page)

Stallion Service Auction Raises Over \$20,000

(Continued from page 12)

Tennessee Walker

Will Bolton, Silver's Big Threat
Frank L. Richards, Prime Time in Color
Catherine Tucker, Color Me Proud

Thoroughbred

Clear Creek Stud, LLC, B.J.'s Mark
Clear Creek Stud, LLC,
Placid Fund
Camelot Farm, Contested Colors
Camelot Farm, Finest Hour
Rancha Fresca, Zede
Rancha Fresca, Upping The Ante
A. Girault Bird and Juanita Bird, Huff
Larry Boothe & Girault Bird, Hold Hands
Keith Chambliss, Texas Terror
William Clifton, Jr., Capitalimprovement
Millennium Farms, Inc., Walesa
Fares Farm, Excellent Secret
Fares Farm, Russian Connection
Fares Farm, Power Storm
Judice Farms, Trophy Hunter
Judice Farms, Valid Belfast
John Franks, Mr. Sparkles
John Franks, Western Trader
JiCo, Inc., Pikepass
Mr. & Mrs. Aubrey J. LaPlace, Ransom Calling
Mr. & Mrs. Aubrey J. LaPlace, Road To Seattle
E.J. Ledet, Stately Slew
Larry Menard, Gebbia
LTC Quarter Horses & Thoroughbreds, Change To Cash
Ro Parra, Holzmeister
Richmond Farms, Middle Man
Laura Ryan, Dealing Richard
Starry Night Farms, Alybenbo
Simpson Farm, Direct Hit
Don Stemmans, Busterwaggley

Don Stemmans, Viva Deputy
Meadow Hill Lane Farm,
Prosper Fager
Meadow Hill Lane Farm, Halissee
Chad And Pat White Farms, Inc.,
Gift Of Gib

Thoroughbred / American Warmblood Society

Elysian Fields, Deputed Duke

Welsh Pony

Forever Arabians North and Pony Farm, Morton's Celebration
Chaparral Stud Farm,
Chaparral's Te Quiero
Chaparral Stud Farm,
Chaparral's Priceless

Zweibruecken (RPSI)

Gestuet Falkenhorst,
Morgengold II

Funded Grants

Moore RM, Venugopal CS, Horohov DW, Eades SC, Blackmer JM, Barker SA, McConnico RS, Pettifer GR, Burba DJ, Holm AS, Hubert JD, Walesby HA, Wilke M, Bueno AC, Ramirez S, Natalini C, French DD, Paccamonti DL, Eilts BE, Hosgood G, Costa LRR, Short CS: Molecular, hemodynamic, pharmacologic and epidemiologic approaches to lameness and poor athletic performance in horses: Biomedical and technologic initiatives to strengthen Louisiana's equine industry and enhance the state's economy. \$308,000 annually recurring funds and \$167,000 one-time capital outlay funds. Governor's Biotechnology Initiative Grant Program, Louisiana Board of Regents. November 2002.

Wilke M, Blackmer JM, Moore RM: Development of a 3-dimensional culture technique for equine mesenchymal stem cells to develop a cell-based cartilage resurfacing

technique. \$4,000. Department of Veterinary Clinical Sciences Organized Research Fund, September 2002.

Hubert JD, Burba DJ, Bolt DM, Ramirez S, Hosgood G, Cho DY: The response of the equine third metacarpal dorsal cortical bone to focused extracorporeal shockwaves after osteostixis. \$4,000. Department of Veterinary Clinical Sciences Organized Research Fund, September 2002.

Rumbaugh ML, Burba DJ, Natalini C, Moore RM: Evaluation of a vessel sealing device (LigaSure™) for small intestinal resection and anastomosis in horses. \$3,000. LSU Equine Health Studies Program, June 2002.

Blackmer JM, Liford J, Eilts BE, Paccamonti DL, Henk WG, Truax RE, Costa LRR, Moore RM: Equine epidermal lamellae 3-dimensional tissue assemblies: A model for the study of the pathogenesis of laminitis. \$5,051. LSU Equine Health Studies Program, June 2002.

Walesby HA, Eilts BE, Venugopal CS, Moore RM, Eades SC: The role of endothelin-1 in the contractility of the non-gravid equine myometrium in vitro. \$6,000. LSU Equine Health Studies Program, June 2002.

Eades SC, Veitch A, Moore RM: The effect of insulin infusion on digital arterial blood flow and digital arterial and venous plasma endothelin-1 and nitric oxide concentrations. \$6,000. LSU EHSP, June 2002.

Walesby HA, Eilts BE, Venugopal CS, Moore RM, Eades SC: The role of tumor necrosis factor and interleukin-1 in the contractility of the non-gravid equine myometrium in vitro. \$6,000. LSU USDA 1433 Formula Funds, June 2002.

West Nile Virus: Its Effects on Louisiana's Horses, Predictions and Ways to Reduce Risk of Infection

Ann Chapman, DVM
Resident in Equine Medicine

Since West Nile virus first appeared in the United States in 1999, both veterinarians and horse owners have been watchful of the potential dangers that this virus poses to horses nationwide. During the US outbreaks of West Nile myeloencephalitis in the past four years, the number of clinically affected horses has been increasing.

In 1999 there were an estimated 22 equine cases of West Nile virus nationwide. In 2000, 60 cases were reported. In 2001, 426 cases were reported and this was the first year that the

virus appeared in Louisiana. In 2002, there have been over 14,000 cases in 40 states, including 362 in Louisiana. The continued expansion of West Nile virus cases points toward permanent establishment of the disease in North America. In warm climates like Louisiana, there is potential for year-round transmission of the virus.

West Nile virus is an arbovirus that is transmitted by a mosquito to its host. Birds are the principal hosts and the only species that maintains blood virus levels capable of infecting mosquitoes, and consequently other species. While many species can become infected and may develop signs of myeloencephalitis, or inflamma-

tion of the brain and spinal cord, horses are a major species at risk and are one of the few in which the disease is potentially fatal.

The clinical appearance of the disease in horses may vary in severity from mild neurologic signs to fulminant fatal myeloencephalitis. Some of the signs that can be observed in clinically affected horses include incoordination or stumbling in the front or rear limbs, weakness or dragging of

"The continued expansion of West Nile virus cases points towards permanent establishment of the disease in North America. In warm climates like Louisiana there is potential for year-round transmission of the virus."

feet, muscle tremors, hypersensitivity, excitability, fever, drooping lower lip, weakness of tongue, difficulty eating, blindness, altered personality, depression, inability to rise and seizures.

Diagnosis of West Nile myeloencephalitis is made by testing the patient's blood for antibodies to the virus. The test takes several days to perform and treatment is often initiated before the results are final. Treatment for West Nile myeloencephalitis is similar to that for other causes of brain and spinal cord inflammation and includes anti-inflammatory drugs and supportive care. Experimental therapies that are available include antiviral drugs, immune system enhancing drugs and

administration of plasma from vaccinated horses.

Fortunately, studies performed after previous outbreaks indicate that less than one percent of infected horses will develop neurologic disease. Studies are underway to determine the number of horses that have been exposed to the virus statewide.

Unfortunately, among the symptomatic horses, 20-40 percent die or are euthanized for humane reasons. In those that recover, some will have neurologic deficiencies that persist for weeks to months, but many return to their previous health.

Some strategies that may reduce the risk of infection of West Nile virus include:

- Vaccination with approved product as directed by your veterinarian.
- Apply mosquito repellents to horses daily.
- Eliminate standing pools of water from flowerpots, rain gutters, discarded tires, buckets, etc.
- Stable horses during the hours of highest mosquito activity (dawn, dusk and early evening).
- Install window and door screens, which may prevent mosquitoes from entering barns.
- Use of fans may reduce the ability of mosquitoes to feed on horses.

Unfortunately, West Nile Virus is here in the United States to stay. Surveillance of state officials, improved diagnostics capabilities of state laboratories and vigilance of horse owners hopefully will limit the impact of this disease on horses in Louisiana.

Biotechnology Grant

(Continued from page 1)

Horohov, Glenn Pettifer and Steven Barker, and other co-investigators include Drs. Ashley Holm, Jeremy Hubert, Honor Ame Walesby, Markus Wilke, Aloisio Bueno, Santos Ramirez, Claudio Natalini, Dennis French, Dale Paccamonti, Bruce Eilts, Giselle Hosgood and Charles Short.

"The focus of the scientific studies will be lameness and musculoskeletal disease because these are the leading causes of poor performance in athletic horses and account for millions of dollars spent in the diagnosis, treatment and prevention of these diseases/injuries. The results of this research can have tremendous impact on the \$1 billion equine industry in Louisiana," said Dr. Moore.

Four multidisciplinary EHSP focus groups will lead concentrated investigations into equine lameness and performance evaluation in the areas of: 1) molecular/cellular biology and gene therapy related to diagnosis, treatment and prevention of joint disease, tendonitis and laminitis; 2) vascular smooth muscle physiology and pharmacology related specifically to the pathogenesis and treatment of laminitis; 3) basic and applied clinical pharmacology and hemodynamics related to drug discovery, development and delivery; and 4) epidemiology of training methods and the occurrence of musculoskeletal disease.

Annual recurring funds of \$308,000 provided by the grant will allow for the hiring of an equine orthopedic surgeon and scientist to lead the molecular biology/gene therapy team, two post-doctoral fellows, two doctoral students and one research associate, which will enhance the existing EHSP personnel.

One-time capital outlay funding of \$167,000 will provide facility enhancement and equipment acquisition to expand research and clinical service capabilities in equine musculoskeletal disease. Enhancements include renovation of laboratories, construction of an equine orthopedic rehabilitation stall and acquisition of

other equipment.

"These studies are at the cutting edge of biotechnological research, and these discoveries will have far reaching effects beyond the equine industry. There is real potential to augment the state's economy through development and marketing of new technologies, pharmaceuticals, diagnostic testing and other therapeutics," noted Dr. Moore.

The EHSP is an internationally regarded equine biomedical program that is unique to Louisiana and the region. The EHSP is striving to become the premier equine biomedical center through leading-edge scientific investigation of equine diseases, contemporary instruction of professional veterinary students and veterinarians in advanced studies programs and enhanced continuing education of horse owners and private equine practitioners. The ultimate goal is to provide state-of-the-art diagnostic and therapeutic capabilities for critically ill and injured horses and optimal clinical service to horsemen throughout the state and the surrounding region.

"Along with anticipated funding from proposed legislation that will appropriate a portion of the tax on slot machines at racetracks to the EHSP, the GBI grant will help us to reach our goal of becoming the premier equine biomedical program in the country," said Dr. Moore.

The purpose of the Governor's Biotechnology Initiative is to help established research programs at the state's four-year institutions and the Pennington Biomedical Research Center that can grow into nationally and internationally recognized programs capable of attracting extramural funding and the highest caliber of researchers. Funding for the Governor's Biotechnology Initiative was established in the 2002 state legislative session. A panel of 10 scientific experts from various fields and throughout the country reviewed all 41 proposals and selected the 16 that received funding.

EHSP Remembers:

Dr. Mike Lee



Dr. Michael J. "Mike" Lee, 39, was tragically killed in an automobile accident last August. Traveling with Mike were his mother and two daughters. His mother was seriously injured, however, his daughters survived with minor injuries.

Mike was born and raised in Leetown, Mississippi. He attended Pearl River Junior College for his undergraduate studies and then attended Mississippi State University for veterinary school, where he graduated in 1988. Mike was active on the rodeo team during both undergraduate and veterinary school.

Mike, a lifetime member of the AQHA and member of the NBHA, was an active member of the equine board of the Hancock County Fair Association, Professional Cowboy's Association and the Tri-State Rodeo Association. He was also a member of the American Association of Equine Practitioners.

Mike and his father, David, owned and operated Flying L Quarter Horse Ranch, a successful breeding program for barrel horses. He also owned and operated Lee Animal Hospital in Kiln, Mississippi for approximately 12 years. "Although the hospital was a mixed animal practice, his true passion was for horses," said Mike's father.

"Mike provided superb veterinary care for his equine patients and excellent service to their owners and trainers. He was more than a colleague and veterinarian who referred horses to LSU - he was a friend and supporter of our equine program," said Dr. Rustin M. Moore.

"Dr. Lee was always a phone call away, whether it was day or night or whether he was out of town", said Ms. Sydney Hines of Pass Christian. "His clients were extremely fortunate to have such a knowledgeable, dedicated and compassionate veterinarian," said Hines.

Mike is survived by his father and mother, David and Patricia Lee, his two daughters, Randa and Renee (Nana), and his niece Mindi Lee.

Our thoughts and prayers are with the Lee family during this difficult time.

EHSP Publications

- Beadle R.E., Horohov D.W., Gaunt S.D.: **Interleukin-4 and interferon-gamma gene expression in summer pasture-associated obstructive pulmonary disease affected horses.** *Equine Vet J* 34 (4) 389-394, 2002.
- Blackmer J.M., Paccamonti D., Eilts B., Costa L.R.R., Koch C.: **Strategies for preventing neonatal isoerythrolysis.** *Comp Cont Educ Pract Vet* 24:562-569, 2002.
- Blackmer J.M., Costa L.R.R., Koch C.: **The jaundiced foal agglutination test.** *Vet Technician* 23:577-579, 2002
- Bolt D.M., Williams J., Burba D.J.: **Traumatic injuries of the large tarsal bones in horses.** *Compend Contin Educ Pract Vet* 24 (9) 724-733, 2002.
- Bowles K.S., Beadle R.E., Mouch S., Pourciau S.S., Littlefield-Chabaud M.A., Le Blanc C., Mistic L., Fermaglich D., Horohov D.W.: **A novel model for equine recurrent airway obstruction.** *Vet Immunol Immunopathol* 87 (3-4) 385-389, 2002.
- Chapman M.R., French D.D., Taylor H.W., Klei T.R.: **One season of pasture exposure fails to induce a protective resistance to cyathostomes but increases numbers of hypobiotic third-stage larvae.** *J Parasitol* 88 (4) 678-83, 2002.
- De la Calle J., Burba D.J., Ramaswamy C.M., Hosgood, G., Williams J., LeBlanc C., Moore R.M.: **Plasma and synovial fluid endothelin-1 and nitric oxide concentrations in horses with normal and diseased joints.** *Am J Vet Res* 63 (12) 1648-1654, 2002.
- Eades S.C., Holm A.M.S., Moore R.M.: **A review of the pathophysiology and treatment of acute laminitis: Pathophysiologic and therapeutic implications of endothelin-1.** *Proceedings Am Assoc Equine Pract, Orlando, FL, 48, 353-361, 2002.*
- Eades S.C., Holm A.S., Moore R.M.: **Role of microvessels in laminitis.** *Proceedings 20th Am Coll Vet Intern Med Forum*, 146-148, Dallas, TX, May 29 - June 1, 2002.
- Eilts B.E., Pinto C.R.F., Paccamonti D.L., Niemanstverdreit A.S., Garcia E., Godke R.A.: **Transvaginal intrafollicular sperm cell injection with concomitant artificial insemination in the cyclic mare.** *Theriogenology* 58, 631-634, 2002.
- Garcia-Seco E., Costa L.R.R., McClure-Blackmer J.M., Foil C.S.: **Necrotizing vasculitis without subcutaneous oedema in a miniature horse.** *Equine Vet Educ* 4: 314-318, 2002.
- Grooters A.M., Whittington A., Lopez M.K., Boroughs M.N., Roy A.F.: **Evaluation of microbial culture techniques for isolation of *Pythium insidiosum* from equine tissues.** *J Vet Diagn Invest* 14, 288-294, 2002.
- Hubert J.D., Grooters A.M.: **Update on equine therapeutics: Treatment of equine pythiosis.** *Comp Cont Educ Prac Vet* 24 (10) 812-815, 2002.
- Hubert J.D., Norwood G., Beadle R.E.: **Equine anhidrosis.** *Vet Clin North Am Equine Pract* 18, 355-369, 2002.
- Kelleman A.A., Luznar S.L., Lester G.D., Paccamonti D.L., LeBlanc M.M.: **Evaluation of transrectal ultrasonographic combined thickness of the uterus and placenta (CTUP) in a model of induced ascending placentitis in late gestation in the pony mare.** *Theriogenology* 2002;58:845-848.
- Kulinski K.M., Thompson D.L., Jr., Capshaw E.L., French D.D., Oliver J.L.: **One season of pasture exposure fails to induce a protective resistance to cyathostomes but increases numbers of hypobiotic third-stage larvae.** *J Parasitol* 88 (4) 678-83, 2002.
- LeBlanc M.M., Giguere S., Brauer K., Paccamonti D.L., Horohov D.W., Lester G.D., O'Donnell L.J., Sheerin B.R., Pablo L., Rodgerson D.H.: **Premature delivery in ascending placentitis is associated with increased expression of placental cytokines and allantoic fluid prostaglandins E-2 and F-2 alpha.** *Theriogenology* 2002;58:841-844.
- Mays M.B.C., LeBlanc M.M., Paccamonti D.: **Route of fecal infection in a model of ascending placentitis.** *Theriogenology* 2002;58:791-792.
- Pinto C.R.F., Paccamonti D.L., Eilts B.E., Short C.R., Godke R.A.: **Effect of nitric oxide synthase inhibitors on ovulation in hCG-stimulated mares.** *Theriogenology* 58:1017-1026, 2002.
- Pinto C.R.F., Paccamonti D.L., Eilts B.E., Short C.R., Gentry L., Thompson D.L., Godke R.A.: **Evidence for a nitric oxide-mediated modulation of equine granulosa cell steroidogenesis.** *Therio-genology* 58: 579-583, 2002.
- Stawicki R.J., Ruebel H., Hansen P.J., Sheerin B.R., O'Donnell L.J., Lester G.D., Paccamonti D.L., LeBlanc M.: **Endocrinological findings in an experimental model of ascending placentitis in the mare.** *Theriogenology* 2002;58:849-852.
- Walesby H.A., Ragle C.A., Booth L.C.: **Laparoscopic repair of ruptured urinary bladder repair in a stallion.** *J Am Vet Med Assoc* 221 (12) 1737-1741, 2002.
- Walesby H.A., Miles K.G.: **Veterinary medicine today: What's your diagnosis?** *J Am Vet Med Assoc* 220 (5) 597-598, 2002.
- Walesby H.A.: **Scouting for a winner. Prepurchase evaluation of performance horses.** *Veterinary Forum* 19 (11) 63-47, 2002.
- Walesby H.A., as expert opinion in the

(Continued on page 16)

EHSP Publications

(Continued from page 15)

article by Marcia King called **Babes in training: Do we ask too much of young horses?** in *Horse Illustrated*; January 2003, pages 28-30.

Wooldrige A.A., Eades S.C., Hosgood G.L., Moore R.M.: **In vitro effects of oxytocin, acepromazine, detomidine, xylazine, butorphanol, terbutaline, isoproterenol, and dantrolene on smooth and skeletal muscle of the equine esophagus.** *Am J Vet Res* 63 (12) 1732-1737, 2002.

Wooldrige A.A., Eades S.C., Hosgood G.L., Moore R.M.: **Effects of treatment with oxytocin, xylazine, butorphanol, guaifenesin, acepromazine and detomidine on esophageal manometric pressure in conscious horses.** *Am J Vet Res* 63 (12) 1738-1744, 2002.

Meetings

American College of Veterinary Surgery Symposium

Drs. Ashley M.S. Holm, Rustin M. Moore, Gary Sod, Markus Wilke and **H. Ame Walesby**

recently represented the SVM Equine Health Studies Program at the 12th American College of Veterinary Surgery Symposium in San Diego.

Dr. Holm presented the following three abstracts: "Alterations in jugular and digital venous plasma endothelin-1 concentrations in horses administered black walnut extract"; "Effects of an endothelin antagonist and a nitric oxide donor on equine digital Starling forces associated with black walnut extract administration"; and "Effects of black walnut extract administration on equine palmar digital arterial and venous rings to endothelin-1, acetylcholine and nitroglycerine." **Dr. Moore** presented the following seminars: "Cephalic venous plasma endothelin-1 concentrations and digital hemodynamic responses to ATP MgCl₂

administration after low-dose endotoxin infusion in horses"; "Effect of ATP MgCl₂ on clinical signs, hemodynamic, metabolic and serum biochemical variables and TNF- α , IL-6 and endothelin-1 in horses administered low-dose endotoxin"; and "The role of nitric oxide in intestinal ischemia-reperfusion injury." **Dr. Sod** presented the abstract, "An in vitro biomechanical comparison of a prototype IM-plate and dynamic compression plate for metacarpophalangeal arthrodesis."

International Equine Colic Research Symposium

Nine equine faculty and advanced studies students represented the LSU School of Veterinary Medicine Equine Health Studies Program (EHSP) at the 7th International Equine Colic Research Symposium in Manchester, England in July. The three-day symposium was sponsored by the British Equine Veterinary Association.

Around 225 researchers attended the conference, representing the United States, Europe, South America, North America and Australia. The nine individuals from the EHSP comprised the largest group in attendance at this international meeting. The group presented a total of 17 abstracts (5 oral and 12 poster presentations), the most by any single institution or program. In addition, Dr. Rustin Moore, director of the EHSP, served as an invited moderator for the session on "pathophysiology".

Drs. Rebecca S. McConnico, Rustin M. Moore, Jeremy D. Hubert, Dennis D. French, C.S. Venugopal, Anne A.

Woolridge, Ashley M. S. Holm, Lais R. R. Costa, and C.M.

Ramaswamy presented scientific abstracts on colic and associated complications, laminitis, intestinal parasitism, endotoxemia and intestinal motility. "The symposium assembled some of the most accomplished and well respected equine clinical and biomedical gastroenterology scientists in the world", said Dr. Moore. "Additionally, the scientific information presented at this and previous colic symposia has a dramatic positive impact on the prevention and treatment of gastrointestinal disease and associated complications in horses."



(l to r): Drs. Jeremy D. Hubert, Anne A. Woolridge, Ashley M.S. Holm, C.M. Ramaswamy, C.S. Venugopal, Dennis D. French, Lais R.R. Costa, Rebecca S. McConnico and Rustin M. Moore at the International Equine Colic Research Symposium in Manchester, England.

The abstracts presented by LSU at the symposium included:

Tetens J, **Moore RM**, Hosgood G, Eades SC, Keowen ML, Horohov DW: "Effects of ATP-MgCl₂ on clinical signs, hemodynamic, metabolic, hematologic, and serum biochemical variables and TNF α , IL-6, and endothelin-1 in horses administered low-dose endotoxin."

Ramaswamy CM, Eades SC, Venugopal C, Hosgood G, Garza Jr

F, Barker SA, Moore RM: "Plasma endothelin-like immunoreactivity in clinically healthy horses and those with naturally acquired gastrointestinal tract disease."

Costa LRR, Eades SC, Tulley RT, Koch CE, Hosgood G, Moore RM: "Plasma magnesium and other electrolyte abnormalities in horses affected with gastrointestinal tract disease."

Hubert JD, Seahorn TL, Oliver JL, Klei TR, Hosgood G, Moore RM: "Alterations in histologic and immunohistochemical staining for nitric oxide in helminth-naive ponies infected with *Strongylus vulgaris*."

Pinto CR, Eades SC, Barker SA, **Moore RM**: "Hemodynamics and pharmacokinetics of Nw-nitro L-arginine (L-NAME) after intravenous bolus administration to conscious horses."

Tetens J, Eades SC, Hosgood G, Koch CE, Garza F, **Moore RM**: "Cephalic venous plasma endothelin-1 concentrations and digital hemodynamic responses to ATP-MgCl₂ administration after low-dose endotoxin infusion in horses."

French DD, Klei TR, Kaplan RM, Pipers F: "Prevalence of anthelmintic resistance on horse farms in Louisiana."

Ramaswamy CM, Eades SC, Moore RM, Venugopal CS: "Identification and characterization of endothelin-1 mediated in vitro responses in equine cecal longitudinal smooth muscle."

Holm AS, Eades SC, and Moore RM: "Evaluation of equine digital Starling forces associated with black walnut extract administration."

Holm AS, Eades SC, Venugopal CS, Koch CE, and **Moore RM**: "Endothelin-1 induces vasoconstriction in the normal equine digit."

Holm AS, **Venugopal CS**, Hosgood G, Eades SC, and Moore RM: "Comparison of effect of two endothelin antagonists on in vitro responses of equine palmar digital arterial and venous rings to endothelin-1 in normal horses and those with naturally acquired laminitis."

Holm AS, **Venugopal CS**, Eades SC, Koch CE, Holmes EP, and Moore RM: "Effects of black walnut extract administration on in vitro responses of equine palmar digital arterial and venous rings to endothelin-1, acetylcholine, and nitroglycerine."

Holm AS, Eades SC, and Moore RM: "Evaluation of jugular and digital venous plasma endothelin-1 concentrations in horses before and after black walnut extract administration."

McConnico RS, Holm AS, Eades SC, Moore RM: "The effect of black walnut extract on equine colonic morphology and in vitro ion transport."

McConnico RS, Klei TR: "Parasitized equine colonic epithelium exhibits an increased chloride secretory response compared to non-parasitized epithelial tissue in vitro."

Wooldridge AA, Eades SC, Moore RM, Hosgood G: "In vitro effects of oxytocin, acepromazine, detomidine, xylazine, butorphanol, terbutaline, isoproterenol, and dantrolene on smooth and skeletal muscles of the equine esophagus."

Wooldridge AA, Eades SC, Moore RM, Hosgood G: "Effects of oxytocin, xylazine/butorphanol combination, guaifenesin, acepromazine, and detomidine on esophageal manometry in conscious horses."

Charitable Gifts to the EHSP

- Dr. Allison Barca
- Big Beaver Company, L.L.C., Mr. Jerry LeBlanc
- The Biedenbarn Foundation, Ms. Sydney Biedenbarn
- Dr. David Bordelon
- Eric and Vicky Busch
- Companions of the School of Veterinary Medicine
- E. Anne Dunn
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- Anne Hornbeak
- Dr. Robert D. Lewis
- Dr. Dennis M. McCurnin
- Sandra Richardson
- Southern Equipment of Lafayette, Inc., Mr. Allen LeBlanc
- Henry J.N. Taub and the Taub Foundation
- James R. and Helen T. Wheatley

Equine Memorial Donations

- Acadiana Equine Clinic in memory of "Blue," a 20-year-old Quarter Horse mare owned by Ms. Linda Water.

Equine Emergency Preparedness

For more information on Equine Emergency Preparedness including emergency telephone numbers for inclement weather, please visit our website at www.vetmed.LSU.edu and click on the EHSP icon.

Mark Your Calendars for Upcoming EHSP Events

January 14, 2003

Equine Education Series

Register to take part in this 6-session series of state-of-the-art equine continuing education seminars organized and sponsored by Judi Gerhardt and Blue Moon Equestrian Center and presented by equine veterinary specialists from the LSU EHSP. For more information on registration, please contact Ms. Judi Gerhardt via telephone: (985) 893-4500 or e-mail: Jgerha3194@AOL.com.

January 25-26, 2003

Equine Artificial Insemination Short Course for Owners & Breeders

The workshop will be conducted by the theriogenology (reproduction) veterinary specialists from the LSU Equine Clinic. The workshop is designed to provide participants with the knowledge and skills to successfully perform artificial insemination with both fresh and cooled semen. Contact Dr. Rebecca Adcock at (225) 578-9826 to obtain more information or register for this event.

February 22, 2003

SVM Open House

The LSU School of Veterinary Medicine will open its doors to the public for Open House 2003, "Fun in the Swamp". A self-guided tour will lead visitors throughout the Veterinary Medicine Building, including the Veterinary Teaching Hospital & Clinics and the Equine Clinic. Special equine demonstrations include an Equine Parade of Breeds and the Equine

High-Speed Treadmill along with many other interesting exhibits and demonstrations. Open House is from 9:00am to 4:00 pm and is free to the public. Contact Dr. Rebecca Adcock at (225) 578-9826 to find out more about this event.

March 22-April 20, 2003

16th International Exhibition on Animals in Art

The School of Veterinary Medicine will host the 16th annual International Exhibition on Animals in Art, with winning entries on display in the Veterinary Medicine Library. The exhibition is free and open to the public during regular library hours. The annual art exhibit, which features animals as the main subject, will begin with an opening reception Saturday, March 22 at 5:30 p.m. In addition to other cash awards, a \$1,000 award will be given for Best of Show, and one entry will be chosen to appear on the cover of the Journal of the American Veterinary Medical Association. For more information about the exhibit, contact Sue Loubiere in the LSU Veterinary Medicine Library at (225) 578-9793.

May 3, 2003

Kentucky Derby Party

The Companions of the School of Veterinary Medicine will host the 4th annual Kentucky Derby party at the Country Club of Louisiana in Baton Rouge to benefit the EHSP. Come join in the fun of betting on the horses, bidding on great items in the silent auction, sipping mint juleps, sampling traditional Kentucky Derby cuisine and helping to support the EHSP. Contact Dr. Rebecca Adcock at (225) 578-9826 to obtain more information about this event.

November 8, 2003

SVM Gala

The third annual SVM Gala, "Barkin on the Bayou," will be held at The FairGrounds Race Course in New Orleans from 7:00 pm to 10:00 pm and will include Louisiana cuisine catered by top-notch restaurants from the New Orleans area, a silent and live auction of exceptional items, music and dancing, socializing and the opportunity to meet the faculty and staff of the School of Veterinary Medicine. Contact Dr. Rebecca Adcock at (225) 578-9826 to find out more about this event.



The treadmill demonstrations are always a popular part of the annual SVM Open House.

YOU Can Take Equine Health Studies

“Full Stride into the Future”

Did you know?

- Your tax-deductible charitable contribution to the Equine Health Studies Program will be used to support research projects, equipment needs, improved facilities and student scholarships in equine studies at the LSU School of Veterinary Medicine.
- We accept gifts of cash, stock or property, which may be made by cash, check, or credit card.
- You may direct your gift to a specific project, or allow us to choose the area of greatest need.
 - Equine Health Studies Program/ Most Pressing Need
 - Equine Intensive Care Unit
 - Equine Research Studies

If you would like information about gifts of stock or property, bequests in wills, or formation of a charitable trust, contact the Office of Development, LSU School of Veterinary Medicine, Baton Rouge, LA 70803, (225) 578-9826.

YES! I would like to contribute to the Equine Health Studies Program at Louisiana State University School of Veterinary Medicine. Enclosed is my tax-deductible contribution of:

\$25 \$50 \$100 \$250 \$500 \$1,000 Other \$ _____

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Direct my gift to: ___ Equine Health Studies Program/ Most Pressing Need
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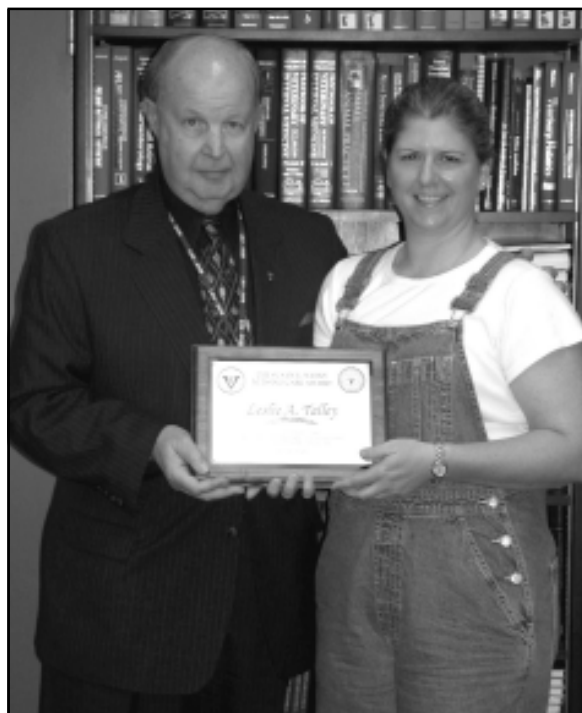
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*Dedicated to the
Health, Well-Being and
Performance of Horses
through Veterinary Research,
Education and Service*

Winter 2003

Dr. Dennis McCurnin, director of the LSU Veterinary Teaching Hospital & Clinic (VTH&C) presents the Susan E. Weeks Nursing Care Award to Ms. Leslie Talley, an equine veterinary technician and technical staff supervisor in the LSU Equine Clinic. This award is given in memory and honor of Susan, a 20-year VTH&C technician who passed away a few years ago from cancer. Susan was the night ICU tech in the small animal clinic for over 10 years and was well known for her compassion and dedication to her job.



The award recognizes a veterinary technician who displays exemplary and passionate patient care and outstanding service to the VTH&C.

Equine Health Tips

For more information on several diseases or injuries of horses, please visit our website (www.vetmed.LSU.edu) and click on the EHSP icon. Then click on Equine Health Tips and expand your knowledge.



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