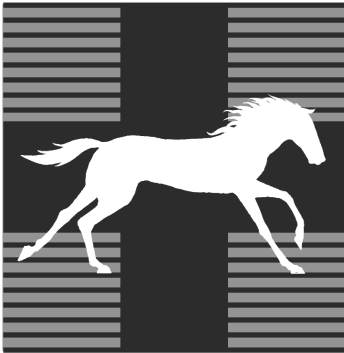


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E H S P

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EQUINE HEALTH STUDIES PROGRAM

**DEDICATED TO THE
HEALTH, WELL-BEING,
AND PERFORMANCE
OF HORSES THROUGH
VETERINARY RESEARCH,
EDUCATION, AND SERVICE**

**QUARTERLY
NEWSLETTER**

**VOLUME 1, NUMBER 2
WINTER 2000**

MANSHIP DONATES TO LSU EQUINE ICU FUND

Construction funds for the new Equine ICU at LSU are rapidly accumulating thanks to the dedication of many individuals in the equine industry throughout Louisiana. The fund is now close to \$400,000 in our quest for \$845,000.

Dr. David Senior, head of the Department of Veterinary Clinical Sciences, and Dr. Rustin Moore, director of the Equine Health Studies Program (EHSP), on behalf of the School of Veterinary Medicine and LSU, recognize the special contribution recently made by **Ms. Paula Manship** to the Equine ICU construction fund.

"Ms. Manship is a special individual with a great sense of caring for the Baton Rouge community," said Dr. Senior. "Witness the major contributions she has made to so many causes, all of which enrich the lives of the citizens of this city. We feel indeed fortunate to be supported in this way by Ms. Manship and we will strive to be worthy of her generosity as the LSU Equine Health Studies Program develops into one of the finest in the U.S."

The Equine ICU, according to Dr. Senior, is one of the most ambitious renovations to the Veterinary Teaching Hospital and Clinics ever undertaken and will provide a long overdue expansion to the current facilities.

"Our equine case load has been steadily increasing to the point where we need the additional space to accommodate

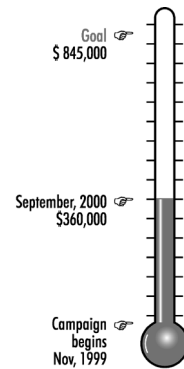
the large number of critically ill and injured horses in our hospital requiring advanced veterinary care," said Dr. Moore. "Many individuals are working hard to help us achieve this goal and their assistance is greatly appreciated. There is an emergence of overwhelming support from all facets of the equine industry."

Dr. Peter Haynes, executive associate dean, and Dr. Moore, have been traversing the state

informing representatives of all constituents of the horse racing industry of the plans to develop the LSU EHSP into a premier equine biomedical center that provides

state-of-the-art clinical service and conducts leading-edge research.

"With the racing industry doing well and the fabulous new Lamar-Dixon Expo Center now on-line in Gonzales, we expect to see a major increase in the quality and quantity of equine activity in the area," said Dr. Moore. "Our equine veterinary facilities need to be expanded and modernized, to meet the needs created by these enhanced equine activities and to enable us to continue to deliver state-of-the-art veterinary services expected and deserved by horse owners and trainers."



DIRECTOR'S MESSAGE

Greetings from the LSU School of Veterinary Medicine.

During the last year, a faculty steering committee has refocused the Equine Veterinary Research Program (EVRP) into the Equine Health Studies Program (EHSP), a more comprehensive program to enhance the research, educational, and service objectives consistent with a land-grant institution, such as LSU.

Several exciting new activities have been established to meet the needs of the equine industry in Louisiana and the surrounding area. These initiatives are collectively referred to as "EQUUS 21-- Full Stride into the 21st Century."

These initiatives are based on our continuing dialogue with equine industry representatives to enhance our program, including:

- Completion of an EHSP strategic plan and business plan for the next five years
- Hosting equine industry organization meetings and providing behind-the-scenes tours and continuing education seminars at the School
- Working with industry organizations to host fund-raising events, which will help support the EHSP, including horse shows, a Kentucky Derby Party, and other activities
- Development of a presentation highlighting the history of our equine programs, our current status, and future directions, which we have begun to deliver to equine industry organizations during meetings of their Board of Directors and general membership with the purpose of engag-

ing our constituents in continuing dialogue and in developing a viable mechanism to achieve substantial recurrent annual funding for our programs

- Developing ideas for expanding and diversifying our funding portfolio
- Increasing the frequency of EHSP publications that reach our constituents, through an annual EHSP Report and an EHSP Quarterly Newsletter
- Developing a webpage to highlight EHSP activities (www.equine.vetmed.lsu.edu).

One of our most exciting recent ventures is the initiation of a capital campaign to fund construction and equipment for an expanded state-of-the-art equine intensive care unit (ICU). We have currently raised approximately \$400,000 through private charitable gifts. The total estimated costs for construction and necessary equipment is \$845,000. We are well on our way; however, in order for this 10-stall, centralized, environmentally controlled facility to become a reality, we still need substantial giving.

Once this project is funded, we plan to initiate other facility enhancements to modernize and

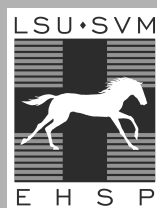
expand our current equine hospital facility to include:

- An expanded equine isolation facility for horses with infectious and contagious disease;
 - Construction of an equine reproduction center; and
 - A lameness evaluation center.
- We are in the process of developing architectural plans for these much needed facilities, and we will keep you apprised of these initiatives as they develop.

We thank you for your continued support of the EHSP. We will continue to keep you informed of our activities and engage you in dialogue to ensure that we continue to meet the needs of the equine industry in Louisiana and the surrounding areas. We invite you to provide your input and to become even more involved in our activities. If you have any questions or suggestions, would like to volunteer your time or resources to assist us in reaching and maintaining our mission, or would like to become more involved in any aspect of the EHSP, please contact me at your convenience.

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

EQUINE HEALTH STUDIES PROGRAM



Dr. Rustin M. Moore

Director, Equine Health Studies Program

Dr. Michael G. Groves

Dean, School of Veterinary Medicine

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Executive Associate Dean

Pat Edwards

Editor

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SALMONELLOSIS

“MUCH ADO ABOUT SOMETHING”

Rebecca S. McConnico, DVM, PhD
Assistant Professor, Equine Medicine
Diplomate, ACVIM

Salmonella is a bacterial germ that can cause diarrheal illnesses in animals and humans. A microscopic organism, it passes from the feces of animals or people, to other animals or people. The bacterium was discovered by and named for an American scientist, David Salmon. This germ has caused illness for over 100 years.

“Salmonellosis” is a term that means infection with Salmonella. There are approximately 2,500 different kinds of Salmonella bacteria, which are termed serotypes or serovars. Some Salmonella serovars have the ability to cause serious illness in humans and animals whereas others do not.

Salmonella organisms live in the intestinal tracts of humans and other animals, including birds and reptiles. *Salmonella* spp. are usually transmitted to humans by eating foods contaminated with animal feces. Horses can become infected with *Salmonella* spp. via fecal-oral route from exposure to a *Salmonella* spp.-shedding animal (usually under crowded conditions).

Hospitalized horses seem to be more at-risk for acquiring acute colitis (diarrhea) associated with *Salmonella* spp. infections. Acute colitis with diarrhea is a potentially life-threatening disease of horses. It is often accompanied by a clinical history containing a stressful event

(transport, change in environment or diet, illnesses requiring antimicrobial or nonsteroidal anti-inflammatory therapy and others). *Salmonella* spp. is often cultured from the manure, rectal lining, or intestinal lymph nodes of horses with colitis.

Salmonellosis is only one of the diseases comprising the acute colitis syndrome in horses. Other well-recognized conditions include antibiotic-induced intestinal clostridiosis, antibiotic induced-colitis, and Potomac Horse Fever (ricketsial organism) as well as a host of others. In survey studies, *Salmonella* spp. have been cultured from the manure of up to 35% of apparently healthy horses (suggesting a carrier state), thus complicating the interpretation or importance of a positive culture.

The spectrum of disease associated with *Salmonella* spp. infections ranges from asymptomatic fecal shedding to acute fulminant septicemia and death. One or two uncommon *Salmonella* serotypes often predominate in hospital outbreaks, suggesting that the infections may be nosocomial (originating in the hospital) in origin.

Determining that *Salmonella* is the cause of colitis in horses depends upon laboratory tests that identify *Salmonella* in the manure of an infected patient. These tests are sometimes not performed unless the laboratory is instructed specifically to search for the organism. Once *Salmonella* spp. have been identified, further testing is

performed to determine the specific type, and whether it is susceptible to specific antibiotics.

Feces of all horses admitted to the LSU Veterinary Teaching Hospital and Clinics with diarrhea are cultured for *Salmonella* (five consecutive daily fecal samples) as well as for other potential pathogens. All horses with diarrhea are housed under strict isolation protocol and are not a threat to other hospitalized patients. Horses that develop diarrhea while in the VTH&C are maintained under isolation conditions as well. In addition to a strict implementation of infectious disease protocol that minimizes potential cross contamination between patients, a *Salmonella* surveillance program is a regular part of the control of nosocomial infections.

Horses that develop diarrhea on the farm should be isolated from other farm stock in case the cause of the disease is infectious. Feed buckets, water containers, bedding, and other potentially manure-contaminated equipment (from diarrheic animals) should not come into contact with healthy animals.

Young, old, or immunocompromised people should not come into contact with horses that have diarrhea until infectious causes are ruled out by your veterinarian. Thorough hand-washing with antibacterial soap will help to minimize the potential spread of infectious agents such as *Salmonella*. Stalls and trailers that were occupied by a diarrheic horse should be cleaned

Continued on page 5

LSU VETERINARIANS RECEIVE USDA GRANT TO STUDY DEBILITATING EQUINE DISEASE

by Melissa Edmonston

Two equine researchers at the LSU School of Veterinary Medicine received a \$216,000 Mechanisms of Disease Grant from the USDA National Research Initiative to further study the cause of equine laminitis.

Dr. Rustin Moore, director of the Equine Health Studies Program and associate professor of equine surgery, and Dr. Susan Eades, associate professor of equine medicine, received the grant for their proposal, "Pathophysiological and therapeutic implications for endothelin in equine laminitis."

Acute laminitis is a severely debilitating, excruciatingly painful and often life-threatening or career-ending disease that affects the soft tissues of the equine digit. It is characterized by edema, vascular thrombosis, ischemia and necrosis of the sensitive laminae. Many horses are ultimately euthanized due to the severe pain associated with the separation of the sensitive and insensitive laminae, resulting in either rotation or distal displacement of the third phalanx.

"Although results of research investigations performed to date suggest that changes in the pressure and flow in the digital microvasculature occur, relatively little knowledge has been gained concerning the specific alterations that occur in the digital vasculature during the initial phases of the disease," explained Dr. Eades. "Consequently, we propose to measure digital blood flow before and throughout the



This horse demonstrates the characteristic stance of horses with acute laminitis.

early stages of the disease."

Drs. Moore and Eades hypothesize that the alterations in digital hemodynamics are caused by endothelin-1, which leads to laminar ischemia and necrosis. In preliminary studies, the two veterinary researchers have demonstrated that endothelin-1 causes intense, prolonged vasoconstriction of the equine digital vasculature in vitro, reduces blood flow to the equine digit in vivo, and induces intense pain when infused locally into the equine digit.

Laminitis will be studied using a carbohydrate overload model mimicking what happens to horses that are allowed to consume too much grain. Digital blood flow, facial arterial pressure, central venous pressure, digital arterial and venous pressure, white blood cell counts,

clinical signs, and lameness will be monitored before and after administration of the starch ration. Ten horses will be treated with saline solution and 10 others will be treated with a drug that blocks the effects of endothelin. The ability of the endothelin blocker to prevent the changes in blood flow caused by laminitis will be evaluated.

"There has been substantial research conducted on laminitis, which has unraveled important information regarding its pathogenesis. However, there is a missing link in the understanding of the disease, keeping us from effective and reliable prevention and treatment. We believe the pathway we are investigating may provide this missing link," said Dr. Moore.

SALMONELLOSIS

Continued from page 3

thoroughly using a foaming detergent with thorough rinsing, followed by disinfecting with a bleach solution and then allowing the stall or trailer to dry for at least 24 hours prior to use. If your horse contracts diarrhea, your veterinarian should be consulted immediately, since sudden onset of diarrhea is potentially life-threatening to horses. Horses with a high-volume diarrhea can become dehydrated and succumb to shock in a matter of just a few hours secondary to fluid and electrolyte losses and

endotoxemia.

Treatment of horses with diarrhea usually includes fluid and electrolyte replacement, alleviation of pain and discomfort with anti-inflammatory and anti-endotoxemic agents, and nutritional support. In some cases antimicrobial agents (antibiotics) may be useful but can potentially cause the animal to become a carrier of *Salmonella*. Horses that have tested positive for *Salmonella* and are discharged to the owner's care, need to be isolated from other farm stock until five negative

Salmonella cultures have been obtained. It is generally recommended to perform five consecutive daily fecal samples for *Salmonella* culture four to six weeks after the horse has recovered from the colitis episode. Horses that test negative for *Salmonella* on these five samples are considered to be safe to return to the general farm population.

Questions regarding this article or other diseases can be directed to the equine clinical faculty at the LSU VTH&C at (225) 578-9500.



Bruce O. Davidson



Jimmie Gibbs Munroe



Richard Shrake

Equine Extravaganza

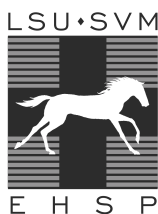
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LSU AND BREC HOST DRESSAGE SHOWS

The first two rated dressage shows in Baton Rouge were held at the BREC Farr Park Horse Activity Center on August 18-19.

"A Midsummer Night's Dressage Show I and II" represented the first collaborative effort between the LSU School of Veterinary Medicine and the Baton Rouge Parks and Recreation Department to serve as a fundraiser for the LSU Equine Health Studies Program. The monies generated from this show were targeted to fund renovations to the Equine Intensive Care Unit at the LSU School of Veterinary Medicine.

Riders from Louisiana and Texas competed for both national and local points and awards. The shows were recognized by the American Horse Show Association, United States Dressage Federation, the Southwest Dressage Championship, the Louisiana/Mississippi Dressage and Combined Training Association, the American Warmblood Society, and the American Bankers Insurance Group.

The format of the show was unusual, with a starting time of 4 p.m. The show ran until midnight on both Friday and Saturday evenings. Junior (under 21) and adult riders participated in classes that ranged from beginner to Olympic level. Amateurs and professionals alike competed with 63 rides each night.

The show was highlighted by the Grand Prix rides of Rambo, a fourteen-year-old Dutch Warmblood stallion, shown by Heather Blitz. Rambo has been on the short list for the Danish Olympic Equestrian Team and

provided inspiring performances for both shows. The show enjoyed a large crowd of onlookers on both evenings, something that is unusual to see at a dressage show.

Elizabeth Madlener of Davidsonville, Maryland, was judge for both shows. Linda Lester of Ft. Walton Beach, Florida, was technical delegate. Betty Fredieu of Hockley, Texas, served as show secretary.

The organizing committee was headed by show manager Gretchen Morgan, who was assisted by Michelle Bergeron, Ricky Bergeron, Dr. Dennis French, Nina French, Hilari French, and Pat Edwards. Dr. Becky McConnico organized a silent auction to generate additional funds for the ICU.

Patrons of the show were Tim and Natalie Smith and the Nutrena Feed Company, and Mrs. Linda Brown.

Class sponsors were Ms. Joanne DeAngelis and Lincoln Financial Advisors, Cary and Karen Prejean, Johnny Spears and Louisiana Feed and Supply, Mr. and Mrs. Rick Burdick, Dr. Angela Samson, Dr. Ed Boldt, and Ms. Nancy Burba.

The Society of Creative Anachronism provided additional entertainment and education for the spectators on Saturday night. Approximately 40 members of the Shire of Wyrmegeist were presented to the crowd and various fighters waged individual battles for honor and glory. Their performance concluded with a melee, during which six knights waged an all-out battle for the audience of close to 200 spectators.

Awards and recognitions were made at a jazz brunch held at the Radisson Convention Center and Hotel on Sunday following the events.

This year's event has been scheduled for August 17-19, 2001.

The following individuals and businesses donated items for the silent auction:

SAC's Western Store
Marston's Feed Co.
St. Gabriel Hardware
The Beauty Box
New York Bagel Bakery
Tigermania
Ellen's Hallmark
Earthly Concerns
Cullen's Toyland
Merry Maids
Dr. Carol Foil
CC's Coffee Shop
Dr. Rustin Moore
Co-op Bookstore
Dr. Dennis French
Mrs. Dennis French
Dr. Philip Hoyt
Daigger Lab Supply
LSU-SVM Library
Dr. Dan Burba
Dr. Rebecca McConnico
LSU Student Chapter of the AVMA
Eatel Communications
Superior Grill
Ms. Catherine Koch
Dr. Kirk Ryan & Ms. Lee Ann Eddleman
O'Brien's Ice House
Perkins Road Hardware
Mr. Harry Cowgill
LSU Student Chapter of AAEP
Judy & Dee Geohagan
Friends of the SVM
Randy and Daynese Haynie
Artist Pete Walls
Mr. John Wilson
Mr. Richard Price
Artist Ralph Chabaud
Right Lead Equestrian Center
Bear Creek Western Store
Artist Frankie Hunter
Mr. Randy Wright
Lockworks
Greco's
Novartis
Mr. and Mrs. Ricky Bergeron
Hill's Science Diet
DISH Network (MHE, Inc.)
Dr. Dina Duplantis
Ms. Allison Bridgewater
Christian Street Market

BONE DENSITY STUDY MAY PREDICT INJURY

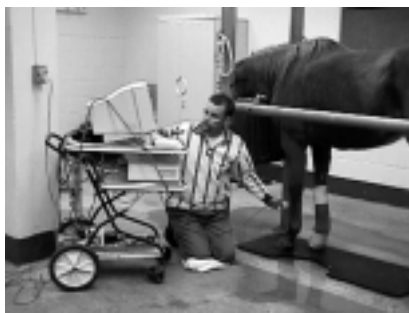
Under the supervision of equine surgeon Dr. Federico Latimer, the Equine Health Studies Program, with the support of Sunlight Corporation, will study the correlation of bone density measurements in young horses in training or racing to the incidence or development of musculoskeletal injuries.

The research will utilize a unique patented ultrasound technology developed by Sunlight that is capable of measuring bone density irrespective of soft tissue coverage. The system uses specially designed probes and filtering technology to provide a very accurate and precise measurement of cortical bone density.

Young horses in heavy training undergo bone modeling and remodeling in response to the repetitive and substantial loads placed on their musculoskeletal system. Bone modeling (increased cortical thickness) will occur faster than bone remodeling in response to stress. Therefore, young horses often have a very dense (brittle) but poorly elastic bone structure that is less capable of absorbing the strains placed on it. Thus, this population of horses seems to be at a greater risk of developing fractures or catastrophic injuries during strenuous athletic activities.

The study will follow young horses during training and racing to obtain serial measurements of bone density from areas that are commonly injured in this population of horses. These include:

- Metacarpal bones (cannon bone) -- bucked shins and



condylar fractures

- Radial facet of the third carpal bone -- chip and slab fractures
- Proximal phalanx (PI) -- sagittal fractures
- Proximal sesamoids -- sesamoid fractures
- Tibia -- stress fractures

The study will validate the technology for use in horses, determine the measurable range of values for each anatomical area, and document any changes that occur during incremental exercise. The research will then attempt to correlate the ultrasonographic bone density measurements with the incidence or occurrence of injuries to identify patterns of increased cortical bone density that may be predictive for injury to those areas. This may permit early identification of horses that are at risk of injury so their training programs can be altered.

SCAAEP UPDATE

Britta Leise, President

The Student Chapter of the American Association of Equine Practitioners (SCAAEP) has been busy recently. Thanks to the equine residents and interns, the club held weekly clinic rounds for Years I-III students to discuss some of the cases seen by the clinicians.

The colic/emergency team is another club activity that allows students to assist clinicians and fourth-year students in the evaluation and treatment of emergency cases.

The SCAAEP had several hands-on laboratories this semester. In September, we had our annual horse handling and physical examination lab. This lab allowed those who were familiar with horses to enhance their diagnostic skills, while those who were new to horses learned about safe and proper handling.

In October, Mac Little, a journeyman farrier, demonstrated proper trimming and shoeing techniques to the club. He showed us the various shoes used for different disciplines and disease conditions and discussed how he prefers to shoe horses with various problems such as laminitis and navicular disease.

Members also volunteered at the Midsummer Night's Dressage Show and auction.

The club participated in the School's annual Open House on February 3. SCAAEP events included an equine treadmill demonstration, an equine ultrasound and arthroscopy demonstration, and an equine parade of breeds.

SCAAEP sent eight members to the AAEP National Convention, held in San Antonio in November. This is the first time in several years that any students from LSU have been able to attend.

EHSP

PUBLICATIONS

Benarafa, C., F.M. Cunningham, A.S. Hamblin, D.W. Horohov, and M.E. Collins. 2000. **Cloning of equine chemokines eotaxin, monocyte chemoattractant protein (MCP)-1, MCP-2 and MCP-4, mRNA expression in tissues and induction by IL-4 in dermal fibroblasts.** Vet Immunol Immunopathol 76:283.

Gilger, B.C., E. Malok, T. Stewart, D. Horohov, P. Ashton, T. Smith, G.J. Jaffe, and J.B. Allen. 2000. **Effect of an intravitreal cyclosporine implant on experimental uveitis in horses.** Vet Immunol Immunopathol 76:239-255.

Horohov, D.W., D.P. Lunn, H.G. Townsend, and D. Wilson. 2000. **Equine vaccination.** J Vet Intern Med 14:221-222.

Horohov, D.W. 2000. **Equine T-cell cytokines. Protection and pathology.** Vet Clin North Am Equine Pract 16:1-14.

Latimer, F.G., A.J. Kaneps, and G.W. Trotter. **Soft Tissue and Ligament Injuries of the Equine Stifle.** Compendium of Continuing Education for The Practicing Veterinarian. August 2000, 22 (8):771-781.

Martin, G.S. **Factors associated with racing performance of Thoroughbreds undergoing lag-screw repair of condylar fractures of the third metacarpal and metatarsal bone.** J Am Vet Med

Assoc 217 (12):1870-1877, 2000.

McConnico, R.S., C.J. Issel, S.J. Cook, R.F. Cook, C. Floyd, and H. Bisson. **Predictive methods to define infection with equine infectious anemia virus in foals out of reactor mares.** J Equine Vet Sci 20 (6) 387-392, 2000.

Strand, E., G.S. Martin, P.F. Haynes, J.R. McClure, and J.D. Vice. **Career racing performance in Thoroughbreds treated with prosthetic laryngoplasty for laryngeal neuropathy: 52 cases (1981-1989).** J Am Vet Med Assoc 217 (11)1689-1696, 2000.

EHSP SCIENTIFIC ABSTRACT PRESENTATIONS

Costa, L.R.R., M.H. Mirza, J. Williams, D.E. Evans, J.J.M. Blackmer, and M.B. Goad. **Acute respiratory distress syndrome in a neonatal foal.** 51st Annual Meeting of the American College of Veterinary Pathologists, Amelia Island, FL, December 2-6, 2000.

Pinto, C.R.F., D. Paccamonti, B.E. Eilts, C.R. Short, and R. Godke. **Inhibition of nitric oxide synthase and follicular dynamics in mares.** Annual Meeting of Society for Theriogenology, San Antonio, TX, November 29, 2000.

Horohov, D.W. **Overview of cytokine research and application in equine biology.** British Equine

Veterinary Association Congress. Birmingham, UK. September 16, 2000.

Horohov, D.W. **Cytokines and parasites.** British Equine Veterinary Association Congress. Birmingham, UK. September 16, 2000.

EHSP GRANTS AND CONTRACTS

Latimer, F.G., J.M. Blackmer, G.S. Martin, J. Addison, and D. J. Burba. **Bone density measurements in Thoroughbred horses.** \$20,000. Sunlight Corporation, September 2000-2001.

Pinto, C.R.F., S. Murton, B.E. Eilts, D.L. Paccamonti, J. Oliver, and R.A. Godke. **Identification of nitric oxide isoforms in the equine ovary.** \$3,411. LSU Veterinary Clinical Sciences Competitive Organized Research Funds, October 15, 2000.

Rumbaugh, M., D.J. Burba, J. Tetens, J.L. Oliver, J. Williams, G. Hosgood, and C.J. LeBlanc. **The effects of intra-articular silicone polymer on synovial fluid, synovial tissue, and articular cartilage in the equine middle carpal joint.** \$3,584. LSU Veterinary Clinical Sciences Competitive Organized Research Funds, October 15, 2000.

Colitz, C.M.H. **Development of a PCR-based assay for diagnosis of fungal keratitis in horses.** \$8,679. LSU USDA 1433 Formula Funds, October 1, 2000.

Costa, L.R.R., S. Gaunt, K. L. O'Reilly, D. W. Horohov, and R.M. Moore. **In vitro identification of mold allergens and cytokines involved in neutrophil chemotaxis in horses affected with summer-pasture associated obstructive pulmonary disease.** \$4,000. Comparative Respiratory Society, August 2000.

Costa, L.R.R., J.J.M. Blackmer, R. Truax, D.W. Horohov, and R.M. Moore. **In vitro effects of IL-4 on mucus and endothelin-1 production by equine bronchial epithelial cells.** \$2,000. LSU Equine Health Studies Program, June 2000.

Dunn, J., M. Hugh-Jones, and S. Messenger. **EEE Surveillance: Utilizing horse serology to identify high and low risk ecologic zones with a GIS.** \$2,000. LSU Equine Health Studies Program, June 2000.

Horohov, D.W. **Identification, localization and sequencing of the Th2 locus in the horse.** \$10,000. LSU USDA 1433 Formula Funds, October 1, 2000.

Horohov, D.W., D.D. French. **Further characterization of age-related immune dysfunction in the horse.** \$6,000. LSU Equine Health Studies Program, June 2000.

McConnico, R.S., and J.L. Oliver. **Mechanisms of injury in equine right dorsal colitis.** \$3,135. LSU USDA 1433 Formula Funds, October 1, 2000.

Moore, R.M., S.C. Eades, C.S. Venugopal, A.S. Holm, J.L. Oliver, and C. LeBlanc. **Pathophysiologic and therapeutic implications for endothelin in equine laminitis.** \$216,000.00. USDA-NRICGP. October 1, 2000.

Pettifer, G.R., F.G. Latimer, R.S. McConico, and S.A. Barker. **The pharmacokinetics of transdermally administered fentanyl in horses.** \$3,230. LSU Equine Health Studies Program, June 2000.

Pinto, C.R.F. **Effect of nitric oxide inhibition on equine granulosa cell steroidogenesis.** \$5,500. LSU USDA 1433 Formula Funds, October 1, 2000.

Venugopal, C.S., S. KrishKumar, and R.M. Moore. **Comparative in vitro responses of airways of clinically healthy and SPAOPD-affected horses to endothelin-1 in the presence and absence of endothelin receptor antagonists.** \$4,000.00. LSU Equine Health Studies Program, June 2000.

DONATIONS TO THE EHSP

- Dr. Anne Borgen
- George Waggoner Stables, Inc.
- Ms. Katherine B. Hoffman
- Mr. and Mrs. G.W. Loewenbaum
- The R.Z. Biedenharn Foundation/Ms. Sydney Biedenharn
- Dr. Patrick R. Sexton, Dubach Veterinary Clinic
- Dr. Julie Cabbage, Acadiana Equine Clinic
- Dr. Julie A. Smith
- Clear Creek Stud, Jan and Val Murrell
- William M. Hines
- William A. Hines
- Hagyard-Davidson-McGee Associates, PSC -- Medicine Group
- The Hubert Charitable Foundation, Mr. and Mrs. Theodore Hubert Mrs. Catherine Hubert Lamb

MEMORIAL GIFTS

In memory of Shylo, a 25-year-old Quarterhorse stallion owned by Ms. Rhonda Satcher,

memorial gift from Dr. Patrick R. Sexton, Dubach Veterinary Clinic

In memory of Charity, a 20-year-old Thoroughbred mare owned by Ms. Joy Young, memorial gift from Dr. Julie Cabbage, Acadiana Equine Clinic

The LSU Equine Health Studies Program thanks Walter Flower and his daughter, Lindsay Flower, for their generous donation in remembrance of their 21-year-old bay Morgan mare, Vivaldi. Vivaldi was a show horse, but had been retired for several years. She had one foal, a filly, that the Flower family still owns. Vivaldi developed severe complications from colic, and she had to be euthanized on July 5, 2000. The Flowers' donation will help LSU continue to make strides in treatment of equine diseases, and we are all very appreciative.

EQUINE SCIENTISTS PRESENT RESEARCH EMPHASIS DAY

Phi Zeta Research Emphasis Day was held at the LSU School of Veterinary Medicine on September 27, 2000.

The goal of this annual Phi Zeta-sponsored event is to promote research in veterinary medicine, to recognize research being conducted by veterinary students, residents, graduate students and faculty, and to encourage veterinary students to pursue careers in veterinary research. The objective of the Phi Zeta Society is to recognize and promote scholarship and research in matters pertaining to the welfare and diseases of animals.

A keynote address, "Production Animal Development Projects," by Dr. Linda Rhodes of the Pharmaceutical Research and Development Division of Merial Limited began Research Emphasis Day.

Fifty-two research posters were presented by professional students, graduate students, and faculty. There were 17 equine-related scientific posters, which are listed below. The posters were judged by a multidisciplinary panel of scientists from across the LSU campus.

The day concluded with a keynote address, "Veterinary Medicine in the Post-Genomic Era: the Art of Synthesis," presented by Dr. Harry Dickerson, professor of microbiology and associate dean of research and graduate affairs and director of the Veterinary Medical Experiment Station at the University of Georgia College of Veterinary Medicine.

Poster Presentations:

L.A. Curtis, R.M. Moore, S.C. Eades, R.E. Truax, J.L. Oliver: **The Role of Endothelin-1 and Nitric Oxide in Equine Laminitis and its Association with Endotoxin Using Digital Endothelial Cell Culture**

A.M.S. Holm, C.J. LeBlanc, R.M. Moore, S.C. Eades: **Characterization of the Role of Endothelin-1 and Nitric Oxide in Platelet-Neutrophil Aggregation and its Association with Acute Laminitis in Horses**

S. Murton, D. Paccamonti, B. Eilts, C. Pinto, E. Garcia: **Use of Acupuncture to Induce Cyclicity in Anestrus Mares**

A.A. Wooldridge, S.C. Eades, R.M. Moore: **The Effects of Oxytocin, Acepromazine, Detomidine, Guaifenesin, and Xylazine/Butorphanol Combination on Esophageal Manometry in Conscious Horses**

L.R.R. Costa, T.L. Seahorn, R.M. Moore, J.L. Oliver, G. Hosgood: **Nitric Oxide as an Inflammatory Mediator in Summer Pasture-Associated Obstruction Pulmonary Disease**

J. Tetens, S.C. Eades, G. Hosgood, C.E. Koch, R.M. Moore: **Colonic and Systemic Hemodynamic Alterations During IV Infusion of ATP-MgCl₂ in Horses**

D.Y. Kim, D. Cho, H.W. Taylor, J.L. Oliver: **Hydrostatic Pressure Induces Chondrocyte Apoptosis Equine Antibody**

M.A. Baudena, M. Kara, M.R. Chapman, T.R. Klei: **Responses to Somatic and L3 Surface Antigens of Cyathostomes**

A.M.S. Holm, S.C. Eades, C.S. Venugopal, R.M. Moore:

Endothelin-1 Induces Vasoconstriction in the Normal Equine Digit

C.R.F. Pinto, D.L. Paccamonti, B.E. Eilts, C.R. Short, R.A. Godke: **Inhibition of Nitric Oxide Synthase (NOS) Delays Ovulation in hCG-Stimulated Mares**

J.D. Edmonds, D.W. Horohov, R.M. Moore, M.R. Chapman, S.S. Pourciau, L. Mystric, T.R. Klei: **Modulation of Equine T-cell responses to *Strongylus vulgaris***

D.W. Horohov, J. Kydd, D. Hannant: **The Effect of Aging on Equine Immune Responses**

L.R.R. Costa, T.L. Seahorn, J. Oliver, G. Hosgood, R.M. Moore: **Nitric Oxide as an Inflammatory Mediator in Horses with Summer Pasture-Associated Obstructive Pulmonary Disease**

L.R.R. Costa, S.C. Eades, R. Tully, S.D. Richard, T.L. Seahorn, R.M. Moore: **Epidemiological Features of Summer Pasture-Associated Obstructive Pulmonary Disease**

L.R.R. Costa, S.C. Eades, R. Tully, S.D. Richard, T.L. Seahorn, R.M. Moore: **Plasma Magnesium Concentrations in Horses with Gastrointestinal Tract Disease**

T.B. Stewart, S.E. Wiles, L.R.R. Costa, T.G. Snider III, J. McClure, D.Y. Kim: **Angiostrongylus cantonesis Now Endemic in *Rattus norvegicus* in the USA**

R.S. McConnico, T.R. Klei: **Parasitized Equine Colonic Epithelium Exhibits an Increased Chloride Secretory Response Compared to Non-parasitized Epithelial Tissue In Vitro**

YOU CAN TAKE EQUINE HEALTH STUDIES “FULL STRIDE INTO THE 21ST CENTURY”

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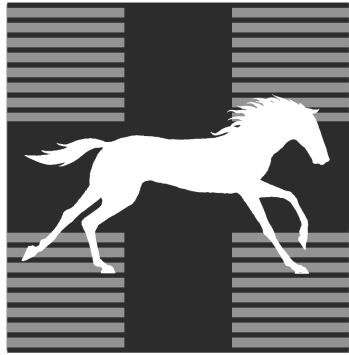
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EQUINE HEALTH STUDIES PROGRAM

**DEDICATED TO THE
HEALTH, WELL-BEING,
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OF HORSES THROUGH
VETERINARY RESEARCH,
EDUCATION, AND SERVICE**

QUARTERLY NEWSLETTER

**VOLUME 1, NUMBER 2
WINTER 2000**

EHSP CALENDAR OF EVENTS

March 17, 2001

Equine Extravaganza

LSU and BREC will cohost Equine Extravaganza, with support from Ralston Purina. Olympic team gold medalist Bruce Davidson, world champion barrel racer Jimmie Gibbs Munroe, and equine trainer Richard Shrake will be clinical instructors. This event will feature activities both at the BREC Farr Horse Activity Park on River Road and at the LSU School of Veterinary Medicine. Seminars, tours and educational exhibits will be at the veterinary school, with an evening social to allow participants to visit with the instructors. Proceeds of the event benefit the LSU Equine Health Studies Program.

May 5, 2001

Kentucky Derby Party

The Companions of the School of Veterinary Medicine will host this second annual event at the Camelot Club to benefit the LSU Equine Health Studies Program.

August 17-19, 2001 A Midsummer Night's Dressage Show

Two rated dressage shows will be held at BREC Farr Park Horse Activity Center, followed by a Sunday jazz brunch.

**For information on these events, call (225) 578-9870.
Visit the School of Veterinary Medicine website at
www.vetmed.lsu.edu**



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