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RESEARCH & SERVICE REPORT

UNIVERSITY OF KENTUCKY COLLEGE OF AGRICULTURE

SCHLAIKJER GIFT AND RCTF MATCH

\$15.2 Million In New Endowments

In the 1997 fall issue of the *Report*, we commemorated with great sorrow the passing of two remarkable individuals, Jes E. and Clementine Mills Schlaikjer. The Schlaikjers had provided a bequest to the University of Kentucky Department of Veterinary Science to establish the William Robert Mills Chair in Equine Infectious Diseases at a minimum of \$3 million, however, it was anticipated that the bequest would exceed that amount. In February of 1999, the estates of these individuals were formally closed, with the final total of the bequest at slightly more than \$7.6 million to the department.

During this same period, the legislators of the Commonwealth of Kentucky and the Council on Post-Secondary Education created the Research Challenge Trust Fund to match, dollar for dollar, new endowments established in Kentucky's public institutions of higher education. Since the Schlaikjers' wills had very specifically spelled out that their gifts could only be used to establish new endowed chairs or professorships, the department applied for and was granted an RCTF match. This match resulted in \$15.2 million in new endowments, more than doubling the existing base of endowments held by the department.

"The magnitude of the Schlaikjers' generosity and the matching funds from the RCTF will be felt in this department and, indeed the horse industry, for many years to come," said Dr. Peter J. Timoney,



Chair of the Department of Veterinary Science and Director of the Maxwell H. Gluck Equine Research Center.

The Schlaikjers' gifts will fund three new chairs in equine infectious diseases, including the William Robert Mills Chair at \$3.25 million, the Clementine Mills Schlaikjer Chair at \$3.25 million and the Jes E. Schlaikjer Chair which, at \$1.18 million, will be tied to a line-item faculty position.

The RCTF matching funds will establish several greatly needed endowments including the Albert G. Clay Endowed Chair in Equine Reproduction at \$3.25 million, a \$2.18 million major endowed research fund in the Department of Veterinary Science, a \$1.25 million addition to the John A. and Elizabeth S. Knight Endowed Chair (total \$2.25 million), and a \$1 million endowment to support the John

A. Morris Library in the Gluck Center.

An endowment means that the capital is invested by the University, with the designated program or purpose receiving most of the interest and dividend income to achieve the stated purpose. The University of Kentucky's endowment policy is to reinvest a portion of the interest and dividend income to hedge against inflation. The capital, however, cannot be spent, making this endowment a permanent source of funding.

"We are very grateful to the Schlaikjers for their interest and foresight," said Deborah Taylor, Executive Director of the UK Equine Research Foundation. "They truly loved horses and they understood the long-lived benefits of creating endowments. Now their love and care for horses will go on forever." ■

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**EQUINE RESEARCH
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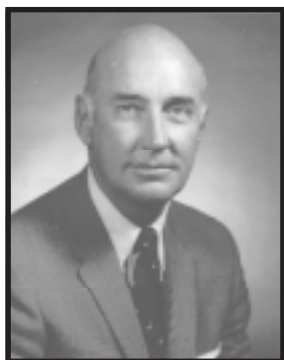
- *EIPH (Exercise Induced Pulmonary Hemorrhage), 1984-1997*
- *EPM (Equine Protozoal Myeloencephalitis), 1977-1998*
- *HYPP (Hyperkalemic Periodic Paralysis), 1984-1997.* This is an update of a bibliography originally produced in 1994.
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FOUNDATION HONORS ALBERT G. CLAY



Albert G. Clay

For the past ten years, the University of Kentucky Equine Research Foundation has been blessed with the outstanding leader-

ship and guidance of Mr. Albert G. Clay, who served as chair of the board from 1988 to 1998. At the October 1998 meeting of the Board of Directors, Mr. Clay was unanimously elected as an honorary life member of the board.

In further appreciation of his service and dedication, the foundation submitted and the University of Kentucky Board of Trustees approved the naming of a chair in equine reproduction as the Albert G. Clay Endowed Chair in Equine Reproduction. This \$3.25 million chair is supported by matching funds from the Research Challenge Trust Fund (RCTF) to the gifts from Jes and Clementine Mills Schlaikjer (see story on page 1).

"Mr. Clay has never sought to be a hero, but he has been a significant champion of our cause for over a decade," said Dr. Peter J. Timoney, Chair of the Department of Veterinary Science and Director of the Maxwell H. Gluck Equine Research Center. "It is fitting that we honor him as he has honored us with his leadership."

A search committee will be established to find a candidate to fill this distinguished chair.

Congratulations, and thank you, Mr. Clay, for honoring us with your guidance, service and support. ■

ALICE CHANDLER ELECTED CHAIR OF UKERF

Every season brings changes of color, climate and texture. So it was in October, when the University of Kentucky Equine Research Foundation elected Mrs. Alice Chandler as its chair. Mrs. Chandler succeeds Mr. Albert G. Clay, who served as chair for the past 10 years.

"It is an honor to serve as chair of such a worthwhile organization as the University of Kentucky Equine Research Foundation," said Mrs. Chandler. "I am a firm believer that at the very core of a healthy horse industry, there must be a healthy animal. Researchers at the Maxwell H. Gluck Equine Research Center are dedicated to protecting the horse from the ravages of disease."

"Although Albert Clay is irreplaceable for his dedication and service to this institution," said Dr. Charles T. Wethington, Jr., President of the University of Kentucky, "Alice Chandler shares his passion and conviction for the Gluck Equine Research Center. We feel she will do an excellent job of leading the foundation into the next century."

Born into the horse business, Mrs. Chandler has established Mill Ridge Farm as one of the premier Thoroughbred horse farms in central Kentucky. She is known as both savvy in business and a consummate horseman. She has served on the UKERF Board of Directors since 1991.

Mrs. Chandler has served her industry well as a leader in a variety



Alice Chandler

of equine organizations, including the Kentucky Thoroughbred Owners and Breeders, the Kentucky Thoroughbred Association, the Keeneland Association, the Thoroughbred Breeders Commission, the Grayson Foundation, the Thoroughbred Owners and Breeders Association, the Breeder's Cup,

and Kentucky State Board of Agriculture. She was elected to the Jockey Club in 1989.

"We are extremely excited with Mrs. Chandler's election," said Dr. Peter J. Timoney, chair of the UK Department of Veterinary Science and director of the Gluck Equine Research Center. "While Mrs. Chandler ushers in a new era, she adds to the distinctive individuals who have served previously in the chair capacity, those being Mr. Albert Clay and Mr. Ted Bassett. We are very fortunate to have three such prominent worldwide equine industry leaders to lead the foundation's efforts and we are indebted for their service and support."

"This is a very exciting opportunity for me and for the industry truly to make a difference in the health of the horse and our industry, not just for today, but for years to come," said Mrs. Chandler. "I am really looking forward to this challenge and hope that you will join with us in supporting one of the finest equine research centers anywhere in the world." ■

PROFILES OF NEW BOARD MEMBERS



Ina Brown Bond

Ina Brown Bond, owner and president of River Bend Farm in Goshen, Kentucky, has served in a wide variety of areas over a number of years. Her family, the Browns of Louisville, has been involved with several breeds within the horse industry.

Mrs. Bond, a graduate of the University of Colorado, has served on the Executive Committee and as President of the W.L. Lyons Brown Foundation Board of Directors. She has also served on many national and Louisville area boards and foundations, including the Bellarmine College Board of Trustees, Kentucky Nature Conservancy Board of Directors, and the Waterfront Development Commission. Her most recent appointment came in January 1999, when she was appointed to the Lenox Board. ■



Reiley McDonald

Reiley McDonald, a native of Upperco, Maryland, has lived in Lexington for over 20 years.

After he graduated from Cornell University with a degree in Animal Sciences, he worked at various tracks in Maryland as an exercise rider and assistant trainer.

Mr. McDonald served as an officer of Fasig Tipton for many years before buying into Eaton Sales in 1991.

A well-respected bloodstock advisor, Mr. McDonald serves in this capacity to Brushwood Stables. He is a dedicated hands-on horseman, riding as a whipper-in with the Iroquois Hunt.

"The work that the Gluck Center does is of the utmost importance to the horse industry," Mr. McDonald said. "The research is critical to our sport, and I'm glad to have the opportunity to make a contribution." ■



Don Robinson

After graduating from the University of Denver with a degree in English literature, Don Robinson moved to northern California, where he built his own farm by hand.

About eight years later, Mr. Robinson came back to Lexington to help his ailing father with his farm, Winter Quarter Farm.

"When I came back here, I thought I was coming back for a year or so," Mr. Robinson said of his return. "That was twenty-five years ago. It just sort of took."

Mr. Robinson is a director of the Kentucky Thoroughbred Association, and is on the Lexington-Fayette Urban County Government Planning Commission. He has served on the Kentucky Thoroughbred Farm Managers Club Board many times, and has also been active in helping the Gluck Center secure funding for the Graduate Student program from the Geoffrey C. Hughes Foundation.

He has raised a number of notable horses at Winter Quarter Farm, including Star of Cozzene, Golden Pheasant, Matty G. and Vicar. ■

Pin Oak Stud Endows \$1 Million Research Fund

A new research endowment has been established and named for Pin Oak Stud, owned by Josephine Abercrombie. The endowment was funded by a private foundation, who doubled their money and their support by taking advantage of the Research Challenge Trust Fund (RCTF) created by the Kentucky Legislature and the Council on Post-Secondary Education in 1998.

The foundation's gift of \$500,000 will establish the endowment and has been approved by the University of Kentucky Board of Trustees for matching funds of \$500,000 from the RCTF. This

\$1 million endowment will be called the Pin Oak Stud Endowed Research Fund for the Department of Veterinary Science.

"We feel that supporting equine research is a very good investment in the health of the horse industry. And, we certainly want to take full advantage of the matching funds available from the state," said Ms. Abercrombie. "But, to us, one of the most critical factors of supporting equine research at the Gluck Equine Research Center is that it not only helps the animal, but the people who are involved with the animal—

from the farm, to the track, to the feed industry, to the economy. We all benefit from a healthy horse."

"An endowment is one of the most wonderful sources of funding for research, because it is a permanent source of funds we can count on for research support," said Peter J. Timoney, Chair of the UK Department of Veterinary Science and Director of the Gluck Equine Research Center. "Initially, the Pin Oak Stud Endowment will support a new research initiative into nocardioform placentitis (see story below) and we are extremely grateful for this support." ■

NOCARDIOFORM PLACENTITIS

DISEASE CAN BRING HEARTBREAKING RESULTS

Eleven months. It's a long wait between the breeding of a mare and the birth of a foal. Imagine that you've waited and waited for one of your best mares to foal what you hope will be the greatest foal ever born. Then, out of the blue, something happens. The mare begins to show signs of early mammary development. An ultrasound shows an abnormality in the placenta. And in an instant, the question arises as to whether your foal will even be born alive.

Nocardioform placentitis has brought uncertainty about the foal you were so eagerly awaiting. Now the waiting becomes anxious hoping.

Nocardioform was recognized as a form of placentitis in the late 1980s. Prior to that time, this particular form of placentitis was not described. Nocardioform placentitis has its own unique pathology, caused by bacteria not generally associated with other types of placentitis.

Since its discovery, a relatively constant number of cases has been seen at the University of Kentucky's Livestock Disease Diagnostic Center — about 15-25 cases per year.

That was until the 1998 foaling season, when the number increased quite significantly to more than 100.

According to Dr. Neil Williams, a veterinary pathologist at the University

of Kentucky's Livestock Disease Diagnostic Center, the trend seems to be continuing. "We're ahead of where we were at this time last year," Dr. Williams said.

Nocardioform placentitis is typified by an area of placental infection associated with the central portion of the placenta, unlike other forms of placentitis that begin in the cervical area.

With nocardioform placentitis, the fetus appears to be harmed through damage to the surface of the placenta, leading to placental insufficiency. The insufficiency becomes greater as the size of the infected area increases. The bacteria characteristically do not spread

from the placenta and affect the organs of the fetus. Neither is there evidence that the bacteria harms the mare or invades the uterine lining. Once the fetus is aborted or the foal is born, the mare typically clears the infection in a short period of time, and will usually breed back normally.

Nocardioform placentitis usually results in one of three outcomes: the fetus is aborted in late gestation, the foal is born prematurely and usually in a weakened state, or the fetus can be carried to term with the birth of an essentially normal foal.

"The disease is particularly heartbreaking because of the outcome," said Dr. Karen McDowell, a reproductive

biologist at UK's Maxwell H. Gluck Equine Research Center. "The costs to the owner of an abortion or birth of a weakened foal can be great."

To date, nocardiform placentitis has been diagnosed on 119 farms in Central Kentucky, dating from 1991 through the 1998 foaling season.

A disconcerting aspect of the disease is that most mares show no outward signs of a problem or infection when carrying a foal with nocardiform placentitis. Some will show premature mammary development and lactation, but there is usually no vaginal discharge with this type of placentitis, making it difficult to detect a problem.

Preliminary diagnosis of nocardiform placentitis usually is based on an ultrasound examination, which can detect placental thickening and separation.

Confirmation of a diagnosis depends upon culture of the organism from the expelled placenta.

Unfortunately, by the time the mare shows outward signs of a problem or a veterinarian can demonstrate placental changes by ultrasound examination, the damage to the fetus has already been done.

Mares with nocardiform placentitis are being treated with antibiotics, but it is not known whether or not the antibiotics help in resolving the problem.

"There is no evidence that treatment, if instigated, alters the outcome significantly," said Dr. Williams. "We just don't know."

• • •

Dr. Williams and Dr. McDowell, along with microbiologist Dr. Mike Donahue, have formed a team to investigate nocardiform placentitis from several angles and hopefully come up with some answers.

"We bring together three complementary disciplines—pathology, bac-

teriology and reproductive biology," Dr. Williams said. "We each have our respective areas of expertise, allowing us to better tackle the problem."

The investigation is divided into four areas: epidemiology, pathology, animal studies and bacteriology.

The epidemiological and pathological studies have been combined in a prospective study approach. As cases come into the Livestock Disease Diagnostic Center, they are worked up on the basis of certain criteria which may help provide the answers to some of the questions about the disease.

After the diagnosis is made and is determined to be nocardiform pla-

The intent is to gain a better understanding of the nature of the disease process, and to try to identify any clues that can help us understand the pathogenesis of the infection.

centitis, a survey is sent to the affected farm to gather more detailed information. Questions are asked about the mare, including her previous breeding history, how she was handled and treated around the time of breeding, different procedures that may have been used, and medications and supplements she may have been on before and after breeding. This type of survey was introduced following the 1998 foaling season, and continues this year.

"The survey is designed to produce information on all these mares that have had nocardiform placentitis, to see if there's some common factor that might help explain this problem," Dr. Williams said.

From the pathology viewpoint, each placenta that comes into the center

with this type of placentitis is studied in terms of the nature and location of the lesion, the pathology involved and the characteristics of the bacteria isolated from the placenta.

"The intent is to gain a better understanding of the nature of the disease process, and to try to identify any clues that can help us understand the pathogenesis of the infection," Dr. Williams added.

Perhaps one of the more interesting aspects of the research being done on this disease lies in the area of animal studies. Dr. McDowell is attempting to create an animal model for the disease so that it can be investigated on a research basis.

"We're currently observing infected animals, taking various samples to see if we can recreate the disease in a research model," Dr. McDowell said.

Dr. McDowell said it is currently too early in the project to tell how it's progressing, since the disease usually doesn't manifest itself until late gestation.

More projects are in the works for the coming breeding season, involving looking at the length of time the organism will stay viable in the reproductive tract after the mare is inoculated, and whether or not various hormone regimes given to mares to help maintain pregnancy may affect the growth of the organism.

Dr. Donahue's focus is on the bacteria itself—trying to characterize the various bacteria involved and using molecular techniques to try to identify the particular species.

"These are unclassified bacteria, so we are trying to characterize them," Dr. Donahue said. "It looks like there are at least three types involved in this condition. More than likely, they are new species that have never been defined."

Dr. Donahue added that if the bacteria can be identified and a DNA

analysis done on them, rapid diagnostic techniques could possibly be implemented. These techniques would allow researchers to detect the bacteria and survey the environment to see where the bacteria reside.

Currently, researchers think the bacteria may reside in the environment and are picked up by animals. It is not believed to be transmitted from mare to mare.

• • •

Dr. Williams said the research team's goal is to better understand the nature of this disease and develop ways to prevent or treat it.

But, as with all research, funding is needed to be able to continue with this study.

Recently, Pin Oak Stud has come to the aid of this research project by permanently putting in place the Pin Oak Stud Endowment at \$1 million. This endowment will be invested, with the interest income and dividends supporting this research. We are grateful to Pin Oak Stud for their generosity, foresight and support.

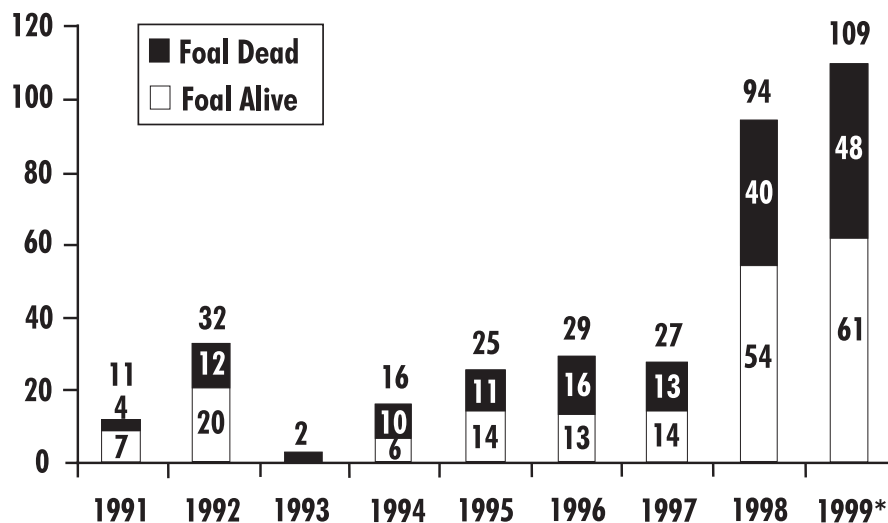
"We have embarked on several preliminary studies with the hopes of expanding our efforts," Dr. Williams said. "We are confident that this project will receive the continued support of the industry."

"We feel more confident in our approach to the research problem if we have some supportive preliminary data," Dr. McDowell added. "Right now, we're gathering the preliminary data."

"We know enough about this problem now for it to be intriguing, but we need to do much more field investigation as well as research studies before we will be able to answer some of the major questions that remain outstanding," Dr. McDowell added. ■

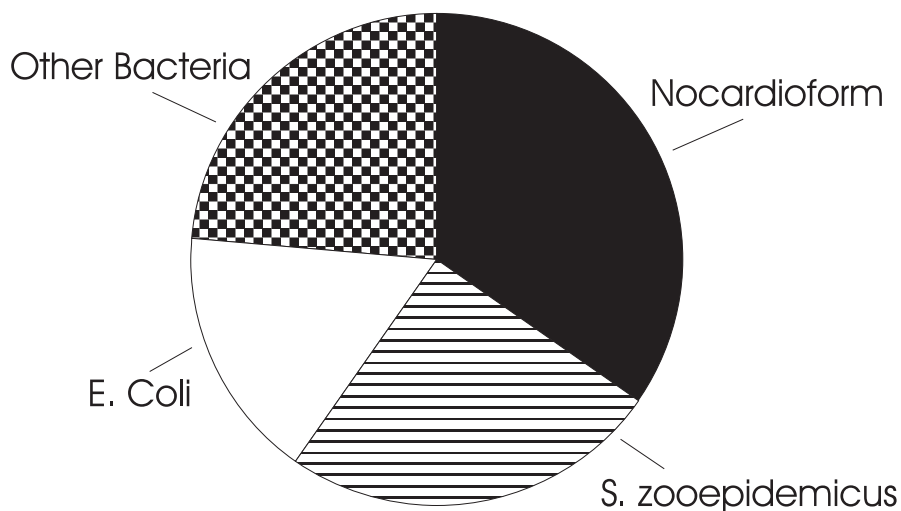
Nocardioform Placentitis

Number of Cases by Foaling Year (1991-1999)



* Through 3/20/99

Placentitis: Etiologic Agents



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For your copy, without obligation, contact the University of Kentucky Equine Research Foundation, 805 S. Limestone Street, Lexington, KY 40536-0339. ■

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