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New One-Step Autologous Cartilage Grafting Technique Demonstrated

Damaged articular cartilage has a poor capacity for spontaneous healing and lesions left untreated often lead to osteoarthritis. There have been a number of techniques developed whereby chondrocytes (cartilage cells) are extracted from the patient, cultured to increase their numbers and reimplanted into a cartilage defect. There is only one procedure called Carticel licensed for humans in the United States and two others that are commonly used in Europe. The Carticel procedure requires two surgical procedures: the first for the

harvest of autologous chondrocytes followed by culture expansion, and the second for the reimplantation of the cells. While the technique has certainly helped human patients, there have been problems associated with hypertrophy of the periosteum (a piece of membrane from the surface of bone that is sutured into the defect and holds the transplanted cartilage cells) and detachment of this periosteal layer and loss of the transplanted cells, as well as the need to remove the delaminated membrane. The two techniques used in Europe

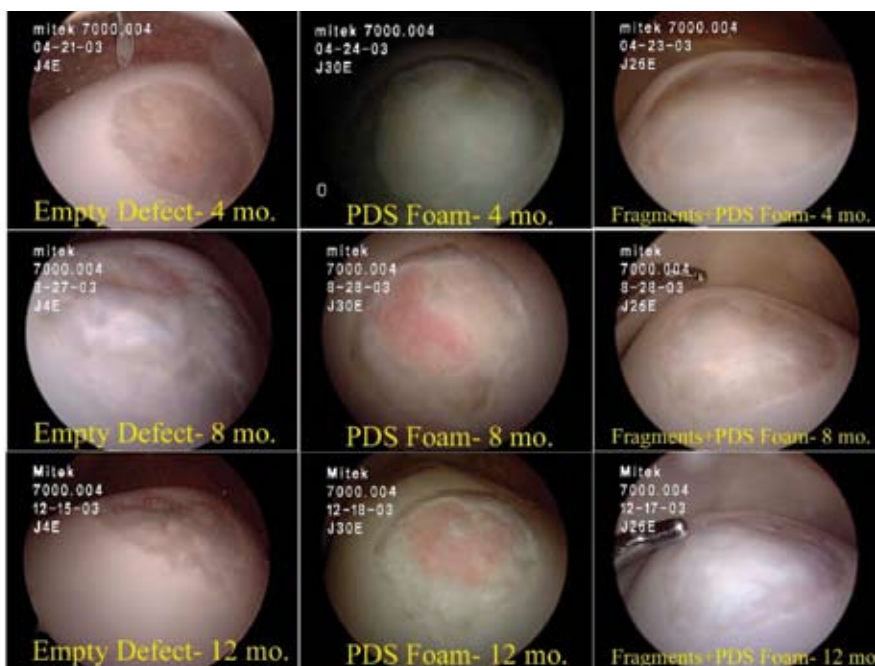


Figure 1 – Arthroscopic views at 4, 8 and 12 months of defects left empty (left), PDS foam alone (center) and PDS foam with morselized cartilage fragments (right).

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Letter From Dr. McIlwraith

We've had another excellent year both in productivity from the Orthopaedic Research Center and financial support of the program. The Equine MRI Center has been able to make unique diagnoses in a rising number of clinical cases that are presented and we have also added MRI evaluations into a number of our research projects.



I would also like to comment on the terrific personnel and productivity within our center. Our senior investigators continue to do and supervise excellent research as well as continue to obtain grant funding. We have also participated in clinical diagnosis and treatment of a fair number of cases. We have had two PhD students finish their programs this year; we wish Drs. Marti Shearin and Val Perino the best in their future careers.

We received a substantial gift of \$500,000 towards long-term funding of personnel from Jon and Abby Winkelried. The Equine Reproduction Laboratory also received \$500,000 from Jon and Abby, making a total gift of \$1 million.

We have had a number of additions to our team, including Dr. Kevin Haussler as an assistant professor. Kevin has DVM, DC and PhD degrees, and is going to provide objective evaluation of complementary therapies, particularly manipulative therapies and acupuncture. Kendra Gates has joined us as receptionist, Joyce Reid is our new business manager and Katie Briggs has just joined us as assistant to the director (David and Michelle Lee relocated to Minnesota).

None of this work is possible without the great help of our research associates and student hourlies, as well as administrative staff. Jon Kushner has replaced Heather Colhoun as clinical trial coordinator. We wish Heather the best in her new career with Pfizer. The morale of our team always impresses me when we are working together as we pursue the common goal of making things better for the horse.



Wayne McIlwraith
Director

Soya-Avocado Nutraceutical Shown to Benefit Equine Osteoarthritis

The first scientifically controlled study testing the benefit of an oral nutraceutical on equine osteoarthritis (OA), sponsored by French-based company V toquinol, was performed by the Orthopaedic Research Center in 2005. The nutraceutical consisted of the extracted oils of soybean and avocado mixed in with molasses as the base for oral dosing.

This study was set up to test pain relief and to determine if the product was disease-modifying as well. In this study, 16 horses had experimentally-induced OA; this induction ensures that all the horses are starting with the same level of OA, a factor missing in most nutraceutical studies. Half

of the horses were treated with the extracted oils of soybean and avocado in molasses, and the other half were treated with just molasses. The horses were given regular treadmill exercise five days a week for the course of the study. All horses were evaluated with regular lameness exams, x-rays, synovial fluid and serum tests to monitor the progress of their OA over the course of several months.

While the results showed that the product did not change lameness or inflammation, it did show positive results in its ability to change the course of the OA. Decreased cartilage erosion, decreased synovial membrane hemorrhage and increased synthesis of glycosaminoglycans in the articular

cartilage were seen, all parameters indicating an improvement in the OA disease process. This finding supports this product being a true disease modifying osteoarthritic drug (DMOAD) or chondroprotective agent rather than simply providing decreased pain/inflammation.

It is thought that this product could be used as a chondroprotective agent against OA; and probably best in combination with a pain-relieving treatment. Details on when the product will be available commercially in the US and the trade name it will be sold under are not available at this time.

Dr. Wayne McIlwraith: Orthopaedic Surgeon, Orthopaedic Patient

Reprinted from the Steadman-Hawkins Research Foundation Newsletter with permission. By Jim Brown, Ph.D., Executive Editor, "UCLA Arthritis Update; Sports Performance Journal"

The first question was a simple one: How did you get from New Zealand to Fort Collins, Colorado? But when his answer began with, "I left New Zealand to lead an Alpine mountain climbing expedition in Peru," it was clear this was not going to be an ordinary interview.

In fact, there is very little that is ordinary about C. Wayne McIlwraith, D.V.M., Ph.D., Director of the Equine Orthopaedic Research Center at Colorado State University, and a lot that is extraordinary. He holds three doctoral degrees from universities in his native New Zealand and the United States and three honorary degrees from prestigious schools in Austria, New Zealand, and Italy. He was awarded a Diploma of Fellowship at the Royal College of Veterinary Surgeons in London for Meritorious Contributions to Learning and a Diploma of Surgery at the University of Guelph in Canada, where he began to specialize in equine surgery. He has operated on more than 10,000 horses around the world, including a former Kentucky Derby favorite (Indian Charlie) and winner (Spend A Buck). Type his name into Google and you'll get more than 900 entries. In short, Dr. McIlwraith is arguably the foremost equine orthopaedic surgeon in the world.

Fortunately for the Steadman-Hawkins Research Foundation, he has collaborated with the staff on groundbreaking research projects and he serves as a member of the Foundation's Scientific Advisory Committee. And fortunately for



Dr. McIlwraith (right) operates on a horse's stifle (knee) joint.

Dr. McIlwraith, he has been a beneficiary of Foundation research and the patient-first approach of the Steadman-Hawkins Clinic. On August 9, 2005, he underwent total hip replacement. The osteoarthritis in his hip may have started with a mountain climbing accident 30 years ago. The surgery took 55 minutes ("skin to skin," as he calls it) and was performed by S-H orthopaedic surgeon and hip specialist, Dr. Marc Philippon. "I didn't select my surgeon overnight and I was confident I was in the best hands. He is a whole new revelation as far as treatment is concerned for hip osteoarthritis. If I had run into him when I first had symptoms, then maybe I wouldn't have needed surgery."

Dr. McIlwraith is also quick to acknowledge the connection between the Foundation and the treatment he received. "I couldn't have received the care, and others

wouldn't benefit from the advances Dr. Philippon will continue to make, without research. And research could not be done without support from the Foundation." The entire process has affected his perspective both as a surgeon (see photo above) and a patient. "I've seen surgery from the other side and it has enhanced my experience."

"The research at the Foundation and the application of that research in the Clinic (and in other clinics around the world) removes many of the limitations on what you can do," says McIlwraith. "Twenty or 30 years ago, doctors wouldn't have repaired a cruciate ligament on an older person. Now Steadman-Hawkins physicians are working on 60 and 70-year-old patients so they can go skiing again. They ask you what you want to do and then do their best to help get you there. I'm

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Dr. Wayne McIlwraith: Orthopaedic Surgeon, Orthopaedic Patient

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doing so well, I plan to rock climb and ski again. I'll still be able to have fun."

Earlier in the journey that led him to Fort Collins, Dr. McIlwraith got a PhD at Purdue. "It gave me an opportunity to do something for the horse." He also went to Michigan State to study human arthroscopy in the knee. He was the only vet among 120 orthopaedic surgeons, and he eventually started doing diagnostic arthroscopic surgery on the horse.

"My relationship with Dr. Steadman began when Steadman-Hawkins moved to Vail. Bill Rodkey (William G. Rodkey, D.V.M., Director of Basic Science Research at Steadman-Hawkins) got me together with Dr. Steadman and Dave Frisbie and started doing research on the horse as a model for human orthopaedics."

What would Dr. McIlwraith like the public to know about the Foundation? "Without basic research, we wouldn't have had the advances in improving cartilage repair, getting rid of calcified cartilage during microfracture, or studying ways to use gene therapy on top of the microfracture procedure. The results of Foundation research are fed right back into finding better ways to help people. We're continually finding a better mousetrap."

C. Wayne McIlwraith has seen the top of the world as a mountain climber (see photo, right) and he is at the top of his professional world as an equine orthopaedic surgeon and scientist. His contributions as a Scientific Advisory Committee member and his experience as a recipient of Steadman-Hawkins research have given him a unique perspective. He is more than a "Patient in the News." He is a



An avid mountaineer, Dr. McIlwraith enjoys ice-climbing east of Vail, Colo., this past March – seven months post-total hip replacement.

former patient who makes news that is benefiting both humans and horses.

Stem Cell Research at the EORC

Damaged cartilage does not have the natural ability to heal itself; current surgical treatment involves harvesting chondrocytes (cartilage cells) from a healthy joint, and implanting them into the diseased joint; an invasive procedure. Current research at the EORC is looking at certain cell-based therapies to re-grow and repair cartilage tissue (chondrogenesis). The study is investigating progenitor cells (stem cells) that can be induced to differentiate into the specific cell type required to repair damaged or depleted cell populations or

tissues. The advantage of this type of treatment is that collection of the progenitor cells is far less invasive than collecting chondrocytes.

An in vitro study by Dr. John Kisiday looked at the cartilage repair potential of both equine adipose (fat)-derived and equine bone marrow-derived progenitor cells. Tissues were harvested, bone marrow cells and fat cells were prepared and encapsulated in agarose and peptide hydrogels, and allowed to culture. Histological analysis for newly synthesized proteoglycans and type II collagen

were used to determine the level cartilage growth.

The bone marrow progenitor cells showed a strong potential to undergo chondrogenesis, characterized by high levels of new tissue synthesis and type II collagen accumulation. In contrast, adipose progenitor cells showed relatively weak biosynthesis and no type II collagen synthesis. These results suggest that equine bone marrow cells are more promising as a source for progenitor cells-based cartilage resurfacing strategies.

Volunteer Program

The volunteer program is a wonderful asset to the Orthopaedic Research Center. Between 10 to 30 people, most of them pre-veterinary students, volunteer each semester. Because the research projects entail many different activities, volunteering at the Orthopaedic Research Center is a wonderful opportunity for a student to get hands-on veterinary experience. The volunteers help with

handwalking and treadmilling horses, administering treatments, assisting during surgery, working in the lab, grooming and, of course, dispensing horse treats. The volunteer experience is designed to help prepare students for the veterinary curriculum.

Currently, our volunteers include the following: Kari Bevevino, Jillian Daniels, Leslie Edmonds, Kelly Fagerstone, Emery

Hickman, Laurel Lachowicz, Meredith Leary, Lauren Marchewitz and Kate Richards.

The Orthopaedic Research Center accepts new volunteers every semester. For more information or to locate an application, visit www.vth.colostate.edu/vth/vol. Questions? E-mail Lindsay Biermann at lbierman@lamar.colostate.edu.

Dr. McIlwraith Receives Milne Award From AAEP



Dr. McIlwraith (second from left) receives the 2005 Milne Award at the AAEP Convention in December 2005. Presenters are (from left) Dr. Nat White, AAEP Foundation Chairman; Dr. Doug Herthel, Platinum Performance and Sponsor; and Dr. Susan White, Chair of AAEP Educational Program Committee.

Dr. Wayne McIlwraith presented the Frank J. Milne State-of-the-Art Lecture at the AAEP Annual Convention in Seattle, on December 5, 2005. His three-hour presentation, "From Arthroscopy to Gene Therapy – Looking in Joints," focused on the progress made in treating traumatic joint disorders and osteoarthritis in the horse.

The Frank J. Milne Lecture debuted at the 1997 convention in Phoenix, and is so named for the AAEP past president. The lecture series focuses on subjects and techniques deemed "state-of-the-art" by the equine veterinary profession.

Loss of an Advisory Board Member: Robert Lewis

It is with great sadness that we report the death of Robert (Bob) Lewis who passed away in February of this year. Bob had been an Advisory Board member for our program from the time of its inception. He and his wife Beverly had provided support to the Charismatic Project that was named after the 1999 Kentucky Derby and Preakness winner, who fractured a distal metacarpal condyle in the Belmont, barely missing out on the Triple Crown. Although the fracture

was career ending, Charismatic was fortunately able to go on as a stallion. Bob passed away February 17, of heart failure at his Newport Beach, CA, home. As Bob Baffert said, "Racing just lost a true giant." Bob Lewis was classy and gracious, and he and Beverly were significant philanthropists. He was interested in helping all aspects of racing, including research to make things better for the horse. Bob will be sadly missed.



At a visit to the EORC, Dr. Frisbie explains to Bob Lewis (center) the work done in one of the labs as Dr. McIlwraith looks on.

Seventh Annual Stallion Auction Enhances Equine Research



Jim Babcock on "Smart Chic Olena"

The seventh annual online stallion auction to benefit equine research at Colorado State University, held in January 2006, proved successful once again, thanks to the generous donations from stallion owners and managers around the country. There were over 90 breedings to some of the finest cutting horses

in the industry. The auction grossed \$174,000, and the proceeds were divided between Equine Reproduction Research and Equine Orthopaedic Research here at CSU.

The highest bids went to Smart Chic Olena, owned by Babcock Ranch, and High Brow Cat, owned by Waggoner Ranch. Thank you to everyone who placed bids on the stallions in this auction, and thank you to all of the stallion owners and breeding managers who generously donated stallion breedings! Your support is invaluable to the equine research programs at CSU. The proceeds from this stallion auction will help the Orthopaedic Research Center discover better methods for treating and preventing equine musculoskeletal disease and injury

and the Equine Reproduction Laboratory improve all areas of equine reproductive health.

2007 Stallion Auction News

The 2007 stallion auction will again be an online auction; however, it will NOT be hosted on eBay. Please watch for ads announcing the January 2007 Stallion Auction in the *Cutting Horse Chatter* and the *Quarter Horse News* starting October 2006. Please check the ads carefully for pre-registration instructions. Or visit our Web site at www.csuequineortho.com for details.

New One-Step Autologous Cartilage Grafting Technique Demonstrated

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have a solid form of cartilage reimplantation but there are still two surgeries required and the expense is high.

More recently, a technique involving reimplantation of cartilage and a one-step procedure has been developed and was tested at the Orthopaedic Research Center in horses. Briefly, 300mg of cartilage are taken from the top of the trochlear ridge in the stifle and minced up into approximately 1mm cubed pieces. These pieces are then suspended in fibrin glue onto a synthetic membrane and immediately reimplanted into the patient's cartilage defect using three PDS/PGA staples specially

developed by Mitek DePuy Biologics.

This procedure under the acronym CAIS was tested in horses in a project funded by Mitek DePuy Biologics. After implantation, the horses did well without any visual gait abnormalities. They were arthroscopied at 4, 8 and 12 months, and maturation of the repaired tissue was observed. The study showed the technique to be quite feasible and easy to do. There was significantly enhanced repair with this technique compared to simple debridement or implantation of the scaffolds alone. The fragments on a PDS-reinforced foam performed well and at 12 months patches of

hyaline cartilage were present in the repaired tissue. There was also good attachment of the repaired tissue. Figure 1 illustrates arthroscopic views at 4, 8 and 12 months of defects left empty, PDS foam alone and PDS foam with the minced cartilage fragments. The results of the study indicate that not only do we have an improved technique for handling cartilage defects in horses (we are currently exploring availability of the foam and staples for horses at a practical price), but also a better treatment for human use. Based on our results, this technique has been approved by the FDA for Phase 1 human clinical studies and it is currently being tested in 30 human patients.

Orthopaedic Research Center: www.csuequineortho.com

Dr. McIlwraith Inducted Into University of Kentucky's Equine Research Hall of Fame Reprinted in part with permission from "The Horse" magazine.



Photo courtesy of Steve Patton, University of Kentucky

Dr. Wayne McIlwraith was inducted into the University of Kentucky's Gluck Equine Research Foundation's Hall of Fame in October 2005, an honor held by

only 17 other inductees. The work of the Hall of Fame members spans several disciplines and covers nearly 100 years of scientific investigation worldwide. It has been 10 years since the last induction into the Hall of Fame, which is an indication of the prestigious nature of this honor, according to Dr. Peter Timoney, director of the Gluck Equine Research Center and a member of the Board of Directors of the center's Foundation.

The Equine Research Hall of Fame was established in 1990 to honor individuals from the international scientific community who have dedicated a major part of their

careers to equine research. The Hall of Fame provides a lasting tribute to world-renowned equine researchers in various disciplines, and recognizes their outstanding achievements and contributions to basic or applied research.

Nominations to the Hall of Fame were received from the researcher's peers. Review and selection of nominees was accomplished by the living members of the Hall of Fame. Nominees can be living or deceased, active or retired. They can have made or can currently be making contributions to any of a diverse field of equine research.

Dr. Chris Kawcak Appointed to Iron Rose Ranch Endowed Chair

Dr. Chris Kawcak was appointed to the Iron Rose Ranch Endowed Chair in Musculoskeletal Research at Colorado State University in July 2005. The Iron Rose Ranch in Carbondale, Colorado generously donated this endowment in 2004. The purpose of the chair is to fund a permanent tenure track position

focusing on the prevention of injuries in the musculoskeletal system of horses.

The chair will focus on researching the causes of joint disease in horses and humans, as well as effective methods to detect the disease. Specifically, Dr. Kawcak will continue the center's work to isolate mechanisms in joint tissues that induce and further the progression of joint injury and osteoarthritis. The chair will further research methods such as computed tomography, which are layered x-rays of joints; magnetic resonance imaging (MRI); and joint modeling to develop strategies for early detection and to predict joint disease. In addition, Dr. Kawcak will be responsible for educating graduate students, undergraduate students and vet students, and will work on clinical orthopaedic patients in the veterinary teaching hospital.

The Colorado State University Foundation permanently invests funds that are given to establish endowed chairs, and the interest generated is used to support the chair. Because the principle amount is not used, endowments allow continuous funding to supplement the chair holder's salary, graduate student work, research and activities that are tied to targeted industries. The \$3 million gift for the Iron Rose Ranch Chair is the highest category of chair at Colorado State University (called a University Chair), and is the second University Endowed Chair at the Orthopaedic Research Center.



New Personnel

Kevin Haussler, DVM, DC, PhD



Dr. Haussler obtained his Doctor of Vet Med (DVM) degree from the Ohio State University College of Veterinary

Medicine. After a small-animal internship, he pursued human training at Palmer College of Chiropractic-West, resulting in a Doctor of Chiropractic (DC) degree. He began a private veterinary chiropractic practice for both equine and small animal patients in 1992. After attending the University of California-Davis to complete a PhD in spinal anatomy and pathology in Thoroughbred racehorses, Dr. Haussler completed post-doctorate work at Cornell University evaluating normal back mobility, back muscle pain and spinal flexibility in horses. While at Cornell, he directed the newly formed Integrative Medicine Service, which provided chiropractic, acupuncture and physical therapy services to both small and large animals.

Dr. Haussler was hired in May 2005 as an Assistant Professor at Colorado State University to pioneer scientific research in complementary and alternative therapies, including objective assessment of pain and initiation of chiropractic, acupuncture, and physical therapy-rehabilitation research.

Christian Puttlitz, MS, PhD

After graduating with a MS degree in Bioengineering from Clemson in 1993, Dr. Puttlitz began a PhD program in Biomedical Engineering at the University of Iowa, receiving his doctorate in 1999. Following a

post-doctorate fellowship at the University of California in San Francisco's Orthopaedic Bioengineering Laboratory and becoming a Full Group Faculty Member two years later, Dr. Puttlitz was promoted to Assistant Professor and Director of the Orthopaedic Biomechanics Laboratory at San Francisco General Hospital. In 2005, Dr. Puttlitz was hired as the Co-Director of the Orthopaedic Bioengineering Research Laboratory and as an Assistant Professor in the Department of Mechanical Engineering at CSU.

Dr. Puttlitz's research interests are mainly focused on using experimental and computation techniques to investigate orthopaedic conditions and their treatments. His current research includes using the finite element method to study how loading changes in the spine following intervertebral disc replacement.

Joyce Reid



Joyce joined the EORC in May 2005 as Accountant. Joyce handles all the financial reporting for the Center

and monitors all research projects. Previously, she was with the Office of Sponsored Programs. Joyce is beginning her fifth year of service at CSU. She has a BS in Business from Ohio Wesleyan University. Joyce enjoys gardening and assisting her daughter in managing her dairy goat coop farm.



Beth Carbone

Beth earned her MS in Microbiology from Colorado State University in 2001, and then spent the next five



years in Denver at National Jewish Medical and Research Center. There she worked on Chronic Obstructive Pulmonary Disease and Osteoarthritis projects where she purified RNA, performed quantitative PCR, tissue culture and proteomics. She was hired by the Orthopaedic Research Laboratory in July 2004 as a research associate to assist in the ORL to conduct proteomics research. Currently, she's working on adeno-associated viral cell culture, bone growth factor cloning, PCR, RNA purification & quantitative PCR projects.

Milynda Miller

Milynda joined the ORC in the summer of 2005 as an hourly employee and became a Research Associate



later that fall. After graduating with a BS degree in Pre-Veterinary Sciences at Clemson University in SC, she moved to Colorado to pursue veterinary school. She has more than 25 years of experience with horses including assistant/technician work at private equine surgical facilities and hospitals. At the ORC she is responsible for all the clinical cases and monitoring anesthesia for all surgeries and MRIs. She also is an animal care technician for the research projects.

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New Personnel

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Jon Kushner



Jon is the Clinical Trial Research Coordinator for the Orthopaedic Research Center. Jon contributes to

our research projects as a Surgical Assistant, and he is responsible for developing research protocols and coordinating activities with study sponsors. Jon's background includes three years with the College of Engineering at CSU as the Orthopaedic Biomechanical Laboratory Coordinator where his focus was biomechanical and biomaterial testing working with spine fusion, allograft, autograft, tendon and ligament research.

Kendra Gates



Kendra joined the EORC team in November 2005 as receptionist/administrative assistant.

This is

Kendra's third year at Colorado State. Previously, she worked as an accounting technician with the Department of Environmental and Radiological Health Sciences. Born in Wyoming, Kendra's lived in Colorado for nearly 6 years. She enjoys reading, soap crafting, hiking and flower-gardening; she is growing her hair for future donation to Locks of Love. Kendra appreciates being surrounded by all of the great minds at work here at the EORC and the opportunity to learn from them.

Katie Briggs



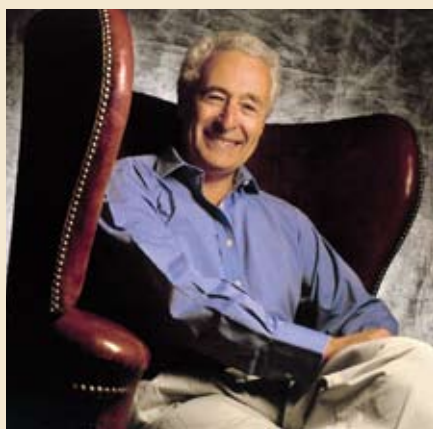
Katie is a Colorado native and became a part-time assistant to Dr. McIlwraith in June 2006.

Katie will coordinate the stallion auctions, produce the newsletters and lab reports, and assist with other fundraising activities. Katie holds a BA in Technical Journalism from Colorado State. She enjoys running, tennis and reading. She and her husband, Randy, have three children: Sofia, 5; Jack, 8; and Henry, 9.

Advisory Board Member Spotlight: Martin Wygod

Martin Wygod is an innovator and successful entrepreneur in the health care industry. Mr. Wygod has been involved with eight public companies that share a common theme of innovation in the delivery of health care services and of causing significant changes that both improve the quality of patient care and lower costs.

Mr. Wygod has served as Chairman of the Board of Emdeon Corporation (formerly WebMD Corporation) since 2001 and as a member of its Board of Directors since 2000. From 2000 until 2003, he also served as its CEO. Since 2005, Mr. Wygod has also served as Chairman of the Board of the WebMD Health Corp. Mr.



Wygod is also the founder and former CEO of Medco Containment Services (now Medco Health Solutions, Inc.).

Mr. Wygod serves on the Board of Trustees of the WebMD Health

Foundation and the Rose Foundation, two independent not for profit foundations created primarily with his contributions. These foundations are dedicated to supporting efforts to improve healthcare services at the community level.

Mr. Wygod is also engaged in the business of racing, boarding and breeding thoroughbred horses, and is President of River Edge Farm, Inc. He and his wife Pam have owned a number of great racing Thoroughbreds, including Benchmark, Sweet Catomine, Exotic Wood, Tranquility Lake and Proposed. Currently, he has won stakes with Proposed and After Market.

Orthopaedic Research Center Supporters – 2005

William E. Morgan Society – \$100,000 - \$999,999

Herbert A. Allen
Iron Rose Ranch
Alice Walton
Walton Family Foundation

President's Society – \$25,000 - \$99,999

IDEXX Laboratories, Inc.
Steadman-Hawkins Sports Medicine
Foundation
Martin J. & Pamela S. Wygod

1870 Club – \$1,870 - \$24,999

Abrakadabracre Partnership
John Andreini
Andreini & Company
BiTerra Quarter Horses, LLC
Blessed Twice Partnership

Calmark Corporation
Capps Radio Ranch
Circle C Ranch Company
Dorothy Russell Havemeyer
Foundation Inc.
EE Ranches
Billy Emerson
EQUUS Foundation, Inc.
Graystone Ranch
Jimmy & Jerri Guest
Winston Hansma & Danny Motes
Drs. Wayne McIlwraith & Nancy
Goodman McIlwraith
Niangua River Ranch
Terry Riddle, Inc.
S & S Farms
SanuWave Services, LLC
Wes & Cindy Smith
Southern California Equine
Foundation, Inc.
Thoroughbred Charities of America
Wichita Ranch
Kobie & Paula Wood

Cornerstone Club – \$100 - \$1,869

American Live Stock Insurance
Mark J. Beverly, DVM
Sharmin E. Bock
Dr. Tom Bohanon
Glenwood Veterinary Clinic
Brokaw Family Foundation
R.A. "Hap" & Farall Canning
Contract Veterinary Sales
C. George & Ruth Dewell
Equine Medical Associates, PSC
Fair Hills Farms
William J. Keller
James M. & Patricia D. Latham
Denise Opdahl
George W. Platt

Advisory Board Member Spotlight: Lindy Burch

Lindy Burch, a well-respected cutting horse trainer, shower, breeder, and stallion owner from Weatherford, Texas, is the newest member of the Equine Orthopaedic Research Center's Advisory Board. She has many honors to her credit, including National Cutting Horse Association (NCHA) Riders Hall of Fame, NCHA Members Hall of Fame, Texas Cowboys Hall of Fame and National Cowgirls Hall of Fame, just to name a few. She was elected and served as NCHA President in 2001-2002 – the only woman to ever do so. She is the 2000 NCHA World Champion and the only woman to have won the NCHA Open World Championship; she has over \$3 million in prize earnings in cutting horse competitions.

Lindy was raised in Southern California, and grew up on the back of a horse, engaging in pleasure, trail and endurance rides with her family. By the age of 15, Lindy was introduced to the cutting horse world, and once in college in the University of California system, she began training cutting horses for the public. She's never looked back.

Introduced to Dr. Wayne McIlwraith by Gail Holmes, a fellow cutting horse enthusiast for whom the Gail Holmes Equine Orthopaedic Research Center is named, Lindy is a strong advocate for the equine research programs at Colorado State University. Horses are indeed her passion, and her interests are not only finding the best treatments for the injuries that equine athletes can sustain, but also finding ways

to prevent those injuries and maintaining the health of horses. Of her recent indoctrination as an Advisory Board Member for the EORC, Lindy said, "I'm really excited about the opportunity. It's an honor." Her standing in the cutting horse industry makes her an ideal fit with the EORC, and we are truly pleased to have her included in our mission to find the best treatments for the musculoskeletal problems in horses.





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State University Orthopaedic
Research Center publication.*

Our Purpose:

*To find solutions to musculoskeletal
problems, especially joint injuries
and arthritis in horses and humans.*

Our Philosophy:

*To offer the best treatment of clinical
cases possible, with continued and
critical assessment of our results;
to use these results to change our
treatments; to point our research
toward prevention of problems we
cannot treat effectively or that cause
permanent clinical damage.*

Our Goals:

*To find new methods to heal joints
already damaged; to use state-of-
the-art research techniques to find
ways to prevent the occurrence of
joint diseases and musculoskeletal
injuries; to find methods of early
treatment to prevent permanent
damage when joint disease does
occur.*

Advisory Board 2004-2005

John Adger

Racing and Bloodstock manager
for Stonerside Stable

John Andreini

Racing Quarter Horse owner and
breeder

Rick Arthur, DVM

Racetrack veterinarian, California;
Past-president, American
Association of Equine Practitioners

Ken Atkinson (deceased 2004)

Director Emeritus, All Right
Parking, Denver; pleasure horse
owner

Vincent A. Baker, DVM

Thoroughbred racehorse
veterinarian

Larry Bramlage, DVM

Specialist equine surgeon, Rood &
Riddle Equine Hospital, Lexington,
Kentucky

Lindy Burch

Cutting horse trainer, Weatherford,
Texas

R.A. "Hap" Canning

Thoroughbred owner, New Mexico

Mark Dedominico, MD

Thoroughbred owner and breeder,
Seattle

Ronald W. Ellis

Thoroughbred racehorse trainer

Joe Kirk Fulton

Racing Quarter Horse owner and
breeder

John Halley, DVM

Veterinarian for Coolmore and
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Gail Holmes

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