



# Newsletter

Equine Assisted Activities Research News from Horses and Humans Research Foundation

## President's Letter

Dear Friends,

This is the last letter that I will write you as president of HHRF. It has been an honor to serve with this hard working, creative board, and a pleasure to work toward the research goals that I believe are critical to the future of equine assisted activities.

It is also been an honor to join with you, and so many others that have experienced the power of our interactions with horses to transform lives, in supporting this work through research. Despite our successful first steps, we know that many doctors, rehab teams and insurance companies still question its validity and do not endorse it. We also know that the only way to create awareness and ensure accessible, well supported programs, is through research.

We are extremely grateful to all who have financially supported us in getting the ball rolling by funding eleven quality research studies in ten years. Now our greatest challenge is to build on this momentum and support the next generation of research so that our early efforts were not in vain. We have more work to do and more research to support if we are to fulfill our mission.

This year your gift matters more than ever! We have a generous \$20,000 challenge gift (thank you Jenny Booth!) if we are able to increase our number of total donors by an unprecedented 20% in 2016. Both the renewal of gifts from our past donors and the acquisition of new donors are essential in order to meet this challenge – please join the donor challenge.

With Sincere  
Gratitude,  
Paul T. Haefner, PhD  
Board President



## \$88,000 Awarded to Slippery Rock University for Therapeutic Riding and Autism Spectrum Disorder Research

The winning proposal, "The Effect of Therapeutic Riding on Stress Levels in Young Adults with Autism Spectrum Disorders", will measure stress reduction impact through Therapeutic Riding and HeartMath interventions. The team will also study equine stress levels related to participant's stress levels.

According to Principal Investigator Dr. Elizabeth Kemeny's proposal:

"With a prevalence of 1 in 68 children, autism spectrum disorders (ASD) rank as the most prevalent developmental disorder...For youth who are transitioning into adulthood, elevated stress levels and lack of coping mechanisms become barriers to health and quality of life. Finding evidence of an effective way, without medication, to address stress in young adults with autism, will have broad implications for health of the individual as well as their family members."

The study will use a crossover design to compare stress management techniques. Thirty participants will be randomly assigned to receive Therapeutic Riding protocol or the HeartMath intervention or no treatment control over a period of 18 months. In each research wave, 10 participants will receive each condition for 10 weeks. The measures of stress, including cortisol in saliva, heart rate, social responsiveness, social anxiety/stress, and perceived stress, will be collected before and after the interventions.

They will also assess caregiver and self report surveys as well as heart variability/coherence measures. A HeartMath Specialist will administer the individual stress management program, a standard instructional method, by following the HeartMath curriculum. A certified instructor will administer the Therapeutic Riding protocol using a standard instructional method (pre-tested in the pilot) which consists of one half hour of ground work (grooming, tacking, relationship building) and one half hour of riding (consisting of warm-up, teaching a basic riding skill, review, and cool down). The saliva and heart rate variability will also be collected from the horses at baseline on a non-riding day, and before and after each session. It is anticipated that the project will be completed by the summer of 2018. *Updates and more info. at [horsesandhumans.org](http://horsesandhumans.org).*

## HHRF's First Focused Research Initiative Commits to Helping Veterans

As part of our commitment to quality research at, one of our goals is to provide empirical evidence of the impact of horses on humans and vice versa. To date, we have funded eleven studies on a broad range of topics. In our May 2016 newsletter, we announced the creation of Focused Research Initiatives (FRI) to assist us in identifying and pursuing specific areas of research interest. We aim to create several FRIs which bring together experts including practitioners, researchers, policy makers and potential funders focused on specific content areas.

Our first FRI will concentrate on Veterans with Traumatic Brain Injury (TBI)/Post-Traumatic Stress (PTS). The FRI program development team was led by Larry Pence, HHRF Board Vice President, along with Mary Jo Beckman (CPEAP, Loudoun Therapeutic), Alison Boyrer (UC Denver & STEPS Foundation), Dr. Phyllis Erdman (Washington State  
*(continued on next page)*

## Completed Research: PTSD and Combat Veterans

Dr. Beth Lanning led the Baylor University team in its recently completed research project, 'Examination of the Effects of Equine Assisted Activities on PTSD Symptoms, Quality of Life, and Functioning in Combat Veterans'. This 2014 awarded grant is now being submitted for publication.

The aim of the study was to investigate the effects of an 8-week structured therapeutic horseback riding (THR) program on Posttraumatic stress disorder (PTSD) symptoms, depression, quality of life, and functioning of combat veterans diagnosed with PTSD. The International Classification of Functioning, Disability and Health (ICF) model was used to help guide the study. Eighty-nine veterans met inclusion criteria and were enrolled in the study. Fifty-one participated in the THR program and 38 were in the waitlist/control group. Seventy-six percent completed all 8 weeks of the program and 55% completed the 2-month follow-up surveys. Twenty-nine of the 38 waitlist/control group members completed all 8-weeks. The sample consisted of 62 males and 27 females, average age was 39 years, and most participants had completed at least 2 tours of duty.

Overall, the findings of this study support the beneficial effects of THR for veterans with PTSD. The participants reported clinically meaningful improvement in PTSD symptoms and mental health, and marked improvement in participation and overall functioning over the course of the program. The differences in PTSD and depression symptoms and overall mental health and functioning scores between the THR and Control group grew larger over time;

the THR group reported more improvement in overall functioning than the Control group. The size of the differences was found to be medium to large, indicating a moderate to high practical significance.

Qualitative analysis of post intervention interviews revealed several emerging themes that were consistent with the quantitative findings. Participants reported feeling anxious, depressed and isolated prior to the intervention. Post intervention responses indicated feelings of self-acceptance, increased confidence, gratitude, hope, reduced anxiety and anger, and increased patience. The participants also stated the importance of the barn environment and the unique relationship with the horse as key components that contributed to their improved quality of life and functioning.

*Additional information about this research project can be found at the HHRF website. Congratulations to Dr Lanning and her team on the completion of this milestone research!*



## HHRF's First Focused Research Initiative Commits to Helping Veterans

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University), Dr. Beth Lanning (Baylor University), Barbara Rector (Therapeutic Riding of Tucson), Dr. Anita Shkedi (Israel National Therapeutic Riding Association), Jane Strong (The Equus Effect), Shari Walls (Semper Fi Fund & Jinx McCain Horsemanship Program) and Bob Woelk (Rainier Therapeutic).

In Phase I, our team's objective was to identify the research most needed to help Veterans. To this end, the team completed the following: A review of past & current research focused on Veterans with TBI/PTS; A survey to learn more about the current application of programs serving Veterans with TBI/PTS; Assessment and prioritization of research needs of Equine-Assisted Activities/Therapy pertaining to Veterans, and; Presentation of recommendations to HHRF's Board of Directors.

Through the hard work of our Veterans FRI team, we identified important recommendations\* for the future of HHRF-funded Veteran's research:

- Focus Veterans funding on Post-Traumatic which impacts the largest group of globally disabled veterans. Research in this area will benefit many thousands of Veteran sufferers, and promote the amazing work of the horse as a health facilitator.
- Take into consideration the scope of research, not just its dissemination to peer reviewed journals, but whether methods can be sustained and utilized globally by all practitioners.
- Encourage more global and bi-national EAA/T studies to

raise the level of awareness.

- All research should utilize tools and metrics including VA measurement tools for most aspects/symptoms associated with PTS - depression, anxiety, levels of anger and quality of life. Studies should make use of physiological data as well as using reliable assessment instruments. Studies should include control groups, account for controlling comorbidities, and account for "treatment as usual" in the design.
- Practitioners must meet certain criteria in terms of level of experience and expertise with EAA/T, Veteran populations, Post-Traumatic Stress.
- Programs must also meet certain criteria in terms of standardized curriculum, interventions, and ability to evaluate program components.
- External factors must be considered including barriers to participation which may impact study recruitment.

*\*more details can be found at our website.*

HHRF is now ready to proceed to Phase II of this Focused Research Initiative which is raising the funds necessary for this research project. There are more than 300,000 Iraq & Afghanistan Veterans diagnosed with Post Traumatic Stress, and many more who are undiagnosed. Please support this initiative that will impact lives of veterans and their families for decades to come. This is your investment in giving back to those who have given so much for us. Thank you!

## What Are YOUR Thoughts?: Beth Lanning, PhD, MCHES

**We'd love to know your thoughts! If you'd like to answer interview questions, email us at [info@horsesandhumans.org](mailto:info@horsesandhumans.org).**

Beth Lanning, PhD, MCHES, is principal investigator on the 2014 HHRF-funded project "Examination of the Effects of Equine Assisted Activities on PTSD Symptoms, Quality of Life and Participation in Combat Veterans" (see article on previous page). Director of the Public Health Undergraduate Program at Baylor University Robbins College of Health and Human Services in Waco, Texas, her research interests include health literacy, sexual violence prevention, quality of life in vulnerable populations in addition to human-animal interaction.

**How does your research and/or other research findings inform the work of EAA practitioners?**

It provides empirical data to support the work of others. The findings of the research also raise additional questions such as the impact of the environment

on the participants. The horse is definitely a part of this environment, but there are other parts that are also important. The barn itself, and being in a more rural area. And veterans working with the veteran participants helps them feel physically safe which then helps them feel emotionally safe. My other research projects have included working with children on the autism spectrum. The environmental component is important with that population as well.

**What areas of research needs are most urgently surfacing in the EAA fields?**

We need studies with larger sample sizes and a standardized intervention across programs. We used a standardized curriculum in our study and all the riding centers were PATH premier accredited centers. This element was important to ensure fidelity of the intervention.

**Full interview at [horsesandhumans.org/interviews](http://horsesandhumans.org/interviews)**



Beth Lanning

## New Board Member: Maureen MacNamara, MSW, PhD

Maureen earned a BS degree in Animal Science from Cornell University, a Master's degree in Social Work from Columbia University and completed a Ph.D. in Social Work from University of Denver. She was one of the first women licensed as a trainer for the United States Trotting Association and has trained and competed in harness racing, hunter/jumper, and pleasure driving events. She has served as a founding board member for organizations such as the certification board for Equine Interaction Professionals,

the Equine Facilitated Mental Health Association, and MnLYNC. Currently, Maureen is assistant professor of community and human service management social work practice and a consultant in human-animal relationships and animal-assisted interventions.



Maureen MacNamara

**Meet the rest of HHRF's Board and Advisors at [horsesandhumans.org](http://horsesandhumans.org).**

## FUNDED RESEARCH

**Improvement in Trunk/Head Stability and Upper Extremity Control after HPOT**, Washington University School of Medicine, Program in Occupational Therapy, St. Louis, MO. Funded 2006 Status: published in the Archives of Physical Medicine and Rehabilitation, 2009.

**The Effect of Equine Assisted Activities on the Social Functioning in Children with Autism**, Good Hope Equestrian Training Center Miami, FL. Funded 2008. Submitted for publication, Pilot study published Journal for Autism & Developmental Disorders.

**Hippotherapy to Improve Postural Control in Children with Cerebral Palsy**, Université de Sherbrooke, Quebec, Canada. Funded 2010.

**Effects of Hippotherapy on Balance and Gait in Ambulatory Children with Spastic Cerebral Palsy**, Central Michigan University, Mt. Pleasant, MI. Funded 2010. Pilot study published in Physical Therapy, Journal of the American Physical Therapy Association, May 2012

**Basic neurobiological and psychological mechanisms underlying therapeutic effects of Equine Assisted Activities**, University of Rostock, Germany. Funded 2010. Published in Volume 8, Issue 1, 2015 of the Journal of Occupational Therapy, Schools and Early Intervention.

**Effects of Hypotherapy on Children with Autism Spectrum Disorders**, Washington University School of Medicine, Program in Occupational Therapy, St. Louis, MO. Funded 2011. Pilot study published in American Journal of Occupational Therapy, Nov/Dec 2013.

**Effects of Equine-Assisted Activities on PTSD Symptoms, Coping Self-Efficacy, Emotion Regulation, and Social Engagement in Military Veterans**, University of Missouri, College of Veterinary Medicine, Columbia, MO. Funded 2012. Preparing for submission.

**Effects of Equine Facilitated Psychotherapy on Post-Traumatic Stress Symptoms in Male Youth**, Tufts University Cummings School of Veterinary Medicine, North Grafton, MA. Funded 2013. Preparing for submission.

**Examination of the effects of equine assisted activities on PTSD symptoms, quality of life and participation in combat veterans**, Baylor University Waco, TX. Funded 2014. Preparing for submission.

**Can horses distinguish between neurotypical and mentally traumatized humans?** University of Guelph Guelph, ON, Canada. Funded 2015

**The effect of therapeutic riding on stress levels in young adults with autism spectrum disorders**, Slippery Rock University, Slippery Rock, PA. Funded 2016

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**Mission:** Through investment in rigorous research, Horses and Humans Research Foundation will serve as a catalyst to advance knowledge of horses and their potential to impact the health and wellness of people.

   This year more than ever,     
your gift matters. Your contribution will help us reach our challenge gift of \$20,000 (Thank you Jenny Booth!). We cannot all DO research, but each of us can contribute to the urgently needed findings by supporting Horses and Humans Research Foundation. Give in honor of a friend, board member, a staff member or volunteer who goes above or beyond – or honor a student who goes out of his or her way to give to others. We will send your honoree an acknowledgement card that makes them feel warmly appreciated. Truly,  
   it's a gift that keeps giving!   

**MORE on EAA Research!** Did you know you can receive more HHRF news more often by signing up for our electronic mailing list? And be sure to join us on Facebook where we share research news, funding opportunities, events and more.  
Visit [horsesandhumans.org](http://horsesandhumans.org) and look for  
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