The Arabian Horse Foundation Research Program

Dedicated to Improving the Health of Arabian Horses

By Beth Minnich

Chair, Research Advisory Panel, Arabian Horse Foundation

The Arabian moise recommend also known as the Arabian Horse The Arabian Horse Foundation, Association Charity, is the charitable arm of the Arabian Horse Association. Restructured in 2007 to expand areas of activity, the Foundation provides financial support for equine health research, youth scholarships, educational programs, and the rescue and rehoming of horses, particularly during catastrophic events. The Foundation has a Board of Directors separate from the Arabian Horse Association and is financially supported solely through donations from the Arabian horse community. The Foundation also has a Research Advisory Panel that serves to evaluate research proposals received for funding consideration and provide recommendations to the Foundation's Board of Directors. Members of the Panel are Beth Minnich (Chair), Dr. Ray Cerniga, Dr. Tim Fleck and Dr. Cory Soltau.

The research arm of the Foundation is committed to supporting equine research directed at improving the health of our beloved horses, particularly those projects focused on issues of particular concern to the Arabian breed. In the five years the Foundation has been involved in funding equine health research, approximately \$45,000 has been distributed to a variety of projects, including collaborations with some of the top veterinary research programs in the world, such as UC Davis, Cornell University, and the Morris Animal Foundation. Although the Foundation has had limited funds available, through these dedicated efforts the Foundation has been successful in not only supporting, but also

moving forward, important research in genetic conditions affecting the Arabian horse.

Projects Supported

- In 2008, the Foundation provided support to revitalize research at Cornell University on Lavender Foal Syndrome (LFS), a rare but lethal neurologic condition found in Arabians. As a direct result of this collaboration, the work done in the lab of Dr. Samantha Brooks resulted in the development of a direct DNA test for LFS, which became commercially available in the US in 2010.
- In addition, the Foundation has also provided continued support since 2008 to the Cerebellar Abiotrophy Project being conducted by Dr. Cecilia Penedo at the UC Davis Veterinary Genetics Laboratory. Cerebellar Abiotrophy (CA) is neurologic disorder which has been identified within a wide range of bloodlines in the Arabian breed. This support has helped to move genetic testing for CA from a marker based DNA test to a mutation based DNA test and continued study is being done to further understand how expression of CA occurs. More information on CA and LFS can be found at ArabianHorses.org/education/ genetic/default.asp.
- Since 2010, the Foundation has also provided support for another project at Cornell University in the Brooks lab to study Equine Metabolic Syndrome (also known as Insulin Resistance) and Cushing's Disease in the Arabian horse. Not only does this study have the potential to assist Arabian horse owners in more readily identifying

- horses at greater risk of being affected by these conditions, given the influence the Arabian has had on other breeds the project also has the potential to provide important information for the health management of horses in general. Preliminary results from this study are encouraging and further work is ongoing.
- The Foundation has also collaborated with Morris Animal Foundation (MAF) research efforts to study melanoma in horses; incidence of melanoma is of particular concern in the Arabian breed. In 2011, the Foundation co-sponsored a genetic based study on melanoma being conducted by Dr. Molly McCue at the University of Minnesota. This project has been successful in identifying a group of grey horses that have a decreased incidence of melanoma. When sample collection and DNA analysis is complete, researchers will be able to classify melanoma patients into risk categories based on genetic predispositions. The ultimate goal for this work is to provide veterinarians with information to help them identify horses at greater risk for developing melanoma. The increased monitoring of at-risk horses will allow for earlier detection and treatment, when there are more therapy options available.

Along with that project, in 2012 the Foundation co-sponsored a MAF study testing the effectiveness of a melanoma vaccine in horses being conducted by Dr. Jeffrey Phillips at the University of Tennessee. This study is directed at determining if the vaccine currently used to treat melanoma in dogs is safe and effective for treating



melanoma in horses. This therapy has the potential to not only treat, but also prevent the development of equine melanoma. As such, the information gained from this study has the potential to make a significant contribution to improving the health of Arabian horses.

- The Foundation has also supported a hoof related study to evaluate hoof interaction with the ground surface and the impact of training and hoof conformation, being conducted by Dr. Babak Faramarzi at Western University. [data from this study currently being evaluated]
- In addition, the Foundation has also donated to the rebuilding fund at the Equine Reproduction Laboratory at Colorado State University, which was destroyed by fire in 2011.

The Arabian Horse Foundation thanks all of its donors for their on-going support and with continued support, the Foundation can continue to expand efforts and work toward making the Arabian horse community a leader in the area of equine health research. Donations can be made by using the donation check box on the AHA membership form when renewing or joining AHA. Donations can also be made online with PayPal at the Foundation's website or by sending a check to the Foundation at the AHA offices. Donors can also designate if they want their funds directed toward a specific area of Foundation activity (such as research or rescue/rehoming or scholarships or education).

For more information about the Foundation, these research projects, and becoming a donor, please visit www.thearabianhorsefoundation.org.

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