

**Colorado State University (\$50,499.00)**

*“Kisspeptin Mediated Regulation of the Equine Hypothalamic Pituitary Gonadal Axis”*

The goal of this project is to better understand the protein Kisspeptin and its role in reproduction. Findings from this research could directly influence current breeding management practices, such as resolving early transition period (i.e. need to keep mares under lights) and synchronization/multiple ovulations.

**Colorado State University (\$19,560.49)**

*“Effects of Clinically Relevant Autologous Conditioned Blood Products (ACBP) on the Anabolic Properties of Equine Digital Flexor Tencytes and Suspensory Ligament Fibroblasts”*

Current treatments for tendon and ligament injuries are lengthy, with variable results and variable methodologies. This project proposes to investigate one newer methodology for tendon healing and compare it to other currently available methods in vitro.

**Colorado State University (\$57,546.50)**

*“The Role of Prostaglandin Transporter (PGT) in Equine Maternal Recognition of Pregnancy”*

Premature pregnancy loss is of great economic importance to the equine industry. This project seeks to identify other mechanisms (PGT) to prevent early pregnancy loss, rather than the currently utilized and expensive progesterone products.

**Occidental College (\$62,468.00)**

*“The Equine Immune Response to *Corynebacterium pseudotuberculosis* Infection: Implications for Diagnosis and Vaccine Development”*

Pigeon fever is seen in all regions of the United States and is characterized by large bacterial abscesses in the horse's pectoral area and or lower abdomen. The renewal of this grant has a goal to develop a vaccine. The current year will evaluate the part insects play in transmission, as well as the horse's immune response to the bacteria itself.

**Ohio State University (\$37,341.00)**

*“Pathophysiology of Equine Metabolic Syndrome: Comparison of Indices of Inflammation in Subcutaneous and Visceral Fat Depots”*

This project will evaluate underlying factors of Equine Metabolic Syndrome (EMS), a condition very common in the Quarter Horse breed. This project will examine the

differences in subcutaneous (neck) and visceral (abdomen) fat deposits in the horse. The goal of this research is to establish an effective treatment regimen for EMS; and hopefully reduce EMS induced laminitis.

**Oregon State University** (\$9,100.00)

*“Molecular Characterization of Early Osteochondrosis Lesions in Prepubertal Foals”*

Osteochondrosis is a developmental condition frequently identified in young horses during early training. Hind limb (stifle/hock) lesions are most common in Thoroughbred and Quarter Horse animals. This renewal project seeks to identify molecular markers (i.e. blood test) which could provide early, less invasive and less expensive manners to identify such conditions.

**Texas A&M University** (\$68,373.00)

*“Biopsy of Equine Embryos for Preimplantation Genetic Diagnosis”*

The goal of this research is to develop an effective genetic testing procedure for equine embryos prior to transfer. If successful, this procedure could allow breeders another manner in which to prevent and eliminate genetic disease from the Quarter Horse population.

**Texas A&M University** (\$49,000.00)

*“Discovering Genetic Causes of Acrosomal Dysfunction in Stallions”*

Sires are typically selected for breeding based on ancestry, performance record and conformation as opposed to reproductive health. The acrosome portion of the spermatozoa is integral to successful reproduction. This project leverages AQHF funding with expertise examining acrosomal dysfunction in humans and mice. Goals include: completion of the genetics of the acrosome and evaluation of genetics involving the acrosome that could be used for treatment or for predictive testing.

**University of Minnesota** (\$57,319.00)

*“Genetic Analysis of Glycogen Storage Disorders in Quarter Horses”*

AQHA and the Foundation have taken a leading role in identifying Polysaccharide Storage Myopathy (PSSM-1) as a genetic disease quite common in the Quarter Horse. Ongoing research into these disorders has led to the identification of additional such conditions: GBED, MH, PSSM-2. Continued funding of this work will provide complete genetic understanding of these newer conditions and provide owners and breeders powerful tools to eliminate these diseases from the breed.

Additional information related to ongoing industry research in these fields may be obtained through the equine medical search database at [www.equineresearch.net](http://www.equineresearch.net). Participating organizations include the American Association of Equine Practitioners Foundation, American Quarter Horse Foundation, Morris Animal Foundation and the Grayson Jockey Club Research Foundation.

For more information on the American Quarter Horse Foundation's equine research program, please contact us at:

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