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Research Briefs

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GRANTS

David Artis, PhD, associate professor, has received three grants totaling more than $4 million, including a $225,000 National Institutes of Health grant for “Regulation of protective immunity following enteric viral infection;” a $2 million, five-year grant to study the “Regulation of protective immunity following enteric viral infection;” and a $1.8 million grant to study “Regulation and function of innate lymphoid cells in the gut.”

Ashley Boyle, DVM, assistant professor of medicine in field service, was recently awarded two grants. The first was awarded by the American Quarter Horse Foundation for a one-year investigation into the “Verification of a Streptococcus equi detection assay for equine nasopharyngeal and guttural pouch wash samples.” The second is to study the “Prevalence and strain characterization of methicillin resistant Staphylococcus aureus (MRSA) from equine nasopharyngeal and guttural pouch wash samples” and was awarded by the Equine Research Endowment Grants, Department of Clinical Studies New Bolton Center.

Ralph Brinster, VMD, PhD, Richard King Mellon Professor of Reproductive Physiology, has been awarded a three-year, $156,000 grant from the St. Baldricks Foundation for his work on “Translating the Science of Testicular Tissue Cryopreservation.”

Serge Fuchs, PhD, professor of cell biology, has been awarded a five-year, $1.29 million National Institutes of Health grant to study the “Role of HOS in Cell Transformation and Apoptosis.”

Brett A. Kaufman, PhD, assistant professor, has been awarded a $100,000 grant from the Trustees of the W.W. Smith Charitable Trust for “Mitochondrial DNA Damage and the Progression Toward Heart Failure.”

Cynthia Otto, DVM, PhD, associate professor of critical care and director of the Penn Vet Working Dog Center, has received a $100,000 grant from the American Kennel Club AKC Companion Animal Recovery Detection Dog DNA Bank.

Nicola Mason, PhD, assistant professor, has received a two-year, $108,527 grant from the Morris Animal Foundation to study “Development of a CD20-specific antibody fragment for targeted therapy of canine B cell lymphoma.”

RECENT PUBLICATIONS


causes the mare little stress and, for a clinician with extensive fetal sexing experience, such as Tamara Dobbie, DVM, is very accurate, as high as 98 percent when performed between 60 and 75 days of pregnancy.

As an example, during the 2011 breeding season three embryos from a single donor mare were transferred into three different New Bolton Center recipient mares and the resulting pregnancies were fetal sexed by Dr. Dobbie before the mares departed allowing Dr. Dobbie to inform the mare owner that, much to her delight, she could plan for the birth of two colts and one filly this spring.

Pregnancies at Risk, Foals in Danger

The majority of mares that are successfully bred will go through the 11 months of pregnancy without event. For the small percentage with a history of pregnancy loss in late gestation, or mares that have developed a serious medical condition that places the pregnancy at great risk, there is the high-risk pregnancy program. Housed in the Graham French Neonatal Section of the Connelly Intensive Care Unit (NICU), the mares are carefully evaluated to determine the status of the pregnancy and potential problems they face during gestation, delivery and early care of the foal. Mares are monitored daily by perinatologists and reproduction clinicians. Weekly transabdominal ultrasound exams and nightly fetal heart rate monitoring are performed to evaluate the well-being of the fetus. A team of veterinarians including perinatal-neonatal, reproductive, anesthesia and surgery specialists are on standby 24 hours a day to provide emergency care for delivery of the foal and to address any crisis situation the mare may encounter.

Once the foal is delivered the NICU is an integral part of the successful reproduction program. Stalls are designed for mare and foal comfort and safety, and the tools to provide sophisticated care including plasma transfer, parenteral nutrition delivery, ventilation and cardiovascular support are readily available.

“The specialists in this unit are experienced in fetal monitoring, birth and neonatal resuscitation and are experts in treating the large variety of diseases which may occur in the newborn secondary to a problem pregnancy,” said Jonathan E. Palmer, VMD, director of perinatal/neonatal programs and chief of the Neonatal Intensive Care Service.

Conclusion

From stallion handling and behavior to breeding, mare management and delivery of a healthy, viable foal, the collective capabilities of the reproductive team, and the support of a full range of specialists allows New Bolton Center to provide an unparalleled level of expertise and service in equine reproduction.

Said Dr. Vanderwall, “It’s essentially a comprehensive, start-to-finish approach to reproduction.”

