

TESTING THAT MAKES HORSE SENSE

By Bionote USA

As equine veterinarians know, caring for a large animal comes with a unique set of challenges, especially transporting a horse and getting it to cooperate for an exam. This makes efficient appointments crucial to ensuring both ease and comfort for the veterinarian and patient.

One way to streamline equine care is with in-clinic or in-stable biomarker testing. Using an analyzer to get results at the point of care removes both the wait time and need for follow-up appointments that often come with sending samples to a reference lab. SAA, progesterone and Foal IgG are three biomarkers that are particularly beneficial with rapid results, giving veterinarians a leg up on a number of clinical applications to help them provide their highest quality of care.

Equine SAA

A 2019 study published in *Equine Vet Journal*, explains that serum amyloid A (SAA) in the blood, "closely reflect[s] the onset of inflammation and, therefore, measurement of SAA is useful in the diagnosis and monitoring of disease and response to treatment."

The study indicated that measurement of this biomarker is useful in detecting digestive, reproductive, respiratory, joint diseases and other conditions, as well as monitoring responses to surgery and other treatments.

SAA's diagnostic capability is further enhanced by in-clinic, quantitative testing. Measurement of this biomarker taken at the point of care can indicate the presence of the conditions listed in the above study and allow veterinarians to perform further testing immediately for pursuing diagnosis and treatment. In addition, prompt access to these numbers is important to detect and respond to negative post-operative responses or adapt a treatment plan to better suit the individual patient when reactions to the existing plan are not ideal.

Equine Progesterone

Measuring progesterone post-ovulation is the key to determining the best window for insemination or embryo transfer when attempting to impregnate a mare. Once the pregnancy is established, hormonal regulation remains important. Progesterone can be particularly useful in developing and maintaining healthy pregnancies until 120 days of gestation when the placenta becomes the primary maintainer.



Regular progesterone testing can help identify mares with low endogenous progesterone levels that require supplementation to avoid pregnancy loss. When these numbers are low, quick intervention is paramount, and a rapid, quantitative assessment of endogenous progesterone levels in the mare allows a veterinarian to make an informed decision on supplementation to protect the pregnancy.

Additionally, tracking this hormone in non-pregnant mares can be used to monitor heat cycles and detect hormone influxes. This is particularly beneficial when a reproductive disorder is suspected or a mare is exhibiting behavioral issues that require intervention. Quantitative testing in these scenarios gives practitioners valuable insight into the potential root of the issue and allows them to pursue corrective action.

Foal IgG

Testing for the IgG biomarker in foals can help serially assess the immune level of neonatal foals and evaluate the quality of a mare's colostrum. As neonatal

foals are born without antibodies and are unable to produce their own immunoglobulin G (IgG), they are vulnerable to various diseases. If a foal fails to consume an adequate amount of high-quality colostrum within its first 24 hours, its IgG levels will be low, increasing the risk of severe infections.

Elevate Equine Care

As part of its recent expansion into the equine market, Bionote USA is proud to announce the addition of SAA, progesterone and Foal IgG tests to its Vcheck line of analyzers and diagnostic tests. Vcheck analyzers utilize state-of-the-art europium-based nanotechnology within their immunoassay fluorescent platform, which is more specific and precise than other testing methods.

Along with the research and innovation that went into developing the tests' capabilities, the new equine tests have been verified by top equine practitioners and are developed with the veterinarian in mind. The frequency at which these tests should ideally be used makes cost per test an important factor. Therefore, veterinarians can benefit from the Vcheck analyzer and tests being the most affordable on the market. This diagnostic equipment was also designed for ease of use and tested repeatedly by both internal and external researchers to ensure accuracy and repeatability to provide the best possible support to equine care.

Sources

Serum amyloid A in equine health and disease - PMC (nih.gov)



Precise Diagnostics for Improved Care