Doctors Make Strides in Laminitis Care

Hoof injuries can be devastating for horses who develop laminitis, an inflammation of the nail bed. Since these hooves support upwards of 1,000 pounds, and horses cannot be on “bed rest,” a nail injury can turn catastrophic. Laminitis claims about 75 percent of its victims, and there is much about the disease that veterinarians still do not understand.

As further studies of the disease and new treatments are crucially needed, two UC Davis faculty are leading that charge. Veterinarian Alonso Guedes, a clinical anesthesiology specialist at the Veterinary Medical Teaching Hospital, and Bruce Hammock, a distinguished professor of entomology, may have discovered a new laminitis treatment for horses not responding to current accepted methods.

In the spring of 2011, a four-year old Thoroughbred named Hulahalla was donated to the Center for Equine Health after suffering a tendon lesion on her left forelimb while on the racetrack. She was treated for that lesion, and recovery continued into the fall of 2011. Hulahalla then took a turn for the worse, developing laminitis. She became severely painful and was unresponsive to the current standard of care. For humane reasons, euthanasia was being considered.

Before that was to happen, Guedes decided to administer an experimental new drug. In his work with pain management, Hammock had discovered that epoxide hydrolase inhibitors (EHi) demonstrated anti-inflammatory properties and could be used for neuropathic and inflammatory pain—exactly what Hulahalla was suffering. Guedes was hopeful that the drug—an EHi commonly referred to as t-TUCB—would be successful on horses. “This is one of the advantages of being part of a research university,” says Guedes. “We get the opportunity to employ drugs not otherwise available.”

Up And Active

After Hulahalla had been down for the majority of two days (extremely rare for a horse, not to mention potentially fatal), Guedes administered t-TUCB. Within a day, she was up and active. “Hulahalla was standing in her stall, interested in her surroundings,” says Guedes. “She began to walk spontaneously. While nowhere near full health, the signs were encouraging, confirming my belief in the treatment.”

The treatment continued for another four days. The horse’s demeanor, posture, mobility and expressions all improved. Also, Hulahalla’s hypertension gradually came down to normal values, further indicating success of the new therapy.

Positive Results Could Revolutionize Care

While this is the first test case of t-TUCB on a horse, the results are promising. Three other horses tested since Hulahalla showed signs of improvement, as well. “These results give us hope that a full clinical trial can be launched in the near future,” says Guedes. Positive outcomes from that effort could lead to t-TUCB becoming an accepted form of treatment, possibly revolutionizing laminitis care throughout the horse world.

This collaborative effort between Guedes and Hammock is a clear example of the excellent patient care UC Davis achieves with a multi-disciplinary approach.