

## Learning Objectives and Education Mission:

This is a four-day seminar is designed especially for and limited to equine veterinarians, equine chiropractic practitioners, equine veterinary technicians, and hoofstock veterinarian zoo staff. It primarily focuses on the equine hoof but much of the information also applies to other species of hooved animals, e.g., zoo and farm animals. The seminar is designed around the recognition that the equine foot is a living part of the whole body and that their relationship is reciprocal and inseparable. More often than not factors that affect the health of one, either directly or indirectly, affect the health of the other. The information in this seminar is helpful, if not vitally important, for properly identifying the origins and treatments of hoof, gait, and postural abnormalities. But hoof shape and health also provide a diagnostic window into the state of a horse's physical and psychological health and factors that impact them. The seminar also provides substantial information that may be important to convey to clients to apprise them about their significant role in horse and hoof health.

Our objectives are to enlighten participants regarding:

1. The nature and evolutionary origin of a healthy hoof form, and why it is optimal for carrying the weight of a horse on all terrains.
2. How a hoof should contact the ground and the physical consequences of deviations from the ideal.
3. How a hoof should be trimmed so that it grows into the natural compact form that functions optimally, contacts the ground correctly, and is in medial-lateral and anterior-posterior balance with the proper alignment of internal and external structures.
4. Why deviations from the ideal, natural hoof form jeopardize long-term soundness and increase the risk of tissue and joint damage.
5. Factors that determine hoof health and form, e.g. trimming, environment, management and use practices, movement, and biomechanics.
6. The etiology, diagnosis, and management of common hoof pathologies.
7. Physiological and biochemical mechanisms through which stress\* can negatively impact horse health, compromise recovery from pathologies and injuries, and impair hoof growth and health.
8. The etiology of obesity and obesity-related insulin resistance and how it increases the risk of chronic laminitis.
9. How the gut microbiome plays a significant role in the regulation of many physiological processes, including the development of obesity, insulin resistance, and hoof and health problems.
10. A proper diet and how to estimate the optimal caloric requirements of a horse.
11. How diet, stress\*, and terrain affect telomere length, the epigenetic landscape, and transgenerational inheritance.
12. The etiology of Cushing's Disease—a significant risk factor for insulin resistance and general health and hoof pathologies.
13. How to counteract the negative impact of stress\* on horse and hoof health through environmental enrichment, e.g., through exercise, training, and management and use practices that fulfill as many of a horse's physical and psychological needs as possible.
14. Using hoof health and form to assess overall horse health, the quality of management and use practices, biomechanics, and soundness.
15. Factors that determine whether riding is a beneficial activity for horses or is detrimental to their general health and soundness.
16. How to improve comfort and relaxation for equine care and interventions.
17. How the information in the seminar pertains to the diagnosis and manipulative treatment of joint misalignments.

\*Note: The term "stress" is used to refer to suboptimal management and use (e.g., riding) practices, the stressors that are inherent to life in captivity, and the pain and discomfort associated with pathologies and injuries.