



**Laminitis Panel Conclusions  
Louisville, KY  
July 24-25, 2004**

More than 40 researchers and graduate students from around the world as well as representatives from the equine industry, funding foundations and equine publications gathered in Louisville, KY after the AAEP Focus Meeting to take part in the first Equine Laminitis Research Panel and Meeting. Sponsored by the American Association of Equine Practitioners (AAEP) Foundation, the American Quarter Horse Association Research Foundation, the Grayson-Jockey Club Research Foundation, and the Morris Animal Foundation, the first half of the meeting consisted of short presentations on current knowledge and research.

A panel session in the afternoon helped to summarize the current state of laminitis research and resulted in a list of conclusions and recommendations to help direct future research.

The presentations from each research group made it clear, that while much is known about the signs, lesions and pathogenesis of laminitis during and after the onset of clinical signs, there is a gap in the knowledge about the early phase of the disease. It was also agreed that there is likely not one trigger factor or mechanism that initiates laminitis, but rather several pathways, which can switch on the disease.

Logically, the foot has been studied as the target organ, but since this disease process appears to be systemic as well as localized in the foot, other organs should be examined during laminitis, particularly during the early phase to determine if lesions or altered function can be identified. Experimental studies now include molecular techniques, which can identify the response of the body and specific tissues at the cellular and gene level. Even with these new methods, the cause and specific mechanisms remain elusive.

The Laminitis Panel, held in the afternoon session along with break out sessions, outlined several conclusions about the direction and needs for laminitis research.

1. Population studies are needed to define the incidence and prevalence of laminitis in the horse population. Risk factors and successful treatments need to be identified as way to prevent laminitis. Methods to prognosticate laminitis are also needed.
2. Laminitis research is woefully under funded. The technology and resources required to advance the knowledge in this area are expensive both for equipment and personnel. Because this disease is unique to the horse with no similar disease found in humans or other animals, the research technology must often be developed exclusively for the horse.

3. The granting process should be simplified and a mechanism developed to facilitate funding multi-center studies. Some of the information requested on grants is redundant and not needed as part of the grant.

4. Collaboration between researchers and research groups is encouraged. Specific techniques should be standardized and central labs for particular techniques set up to help conserve resources. Tissue and serum banks should be set up for multi-site participation and extended use. Forward planning of research is encouraged and increased communications including circulating grants and projects prior to initiation will reduce redundancy and stimulate collaboration.

5. Communications between research groups needs to be increased. Use of a Web site or listserv as a resource for communication should be developed. Repeating a laminitis research meeting every two years is recommended.

6. Create a laminitis association to help educate researchers, veterinarians and horse owners about the disease and the need for further research.

The assembled group of investigators represented a diverse and extremely talented group that has the potential to find the answers that will help prevent and treat laminitis. The equine industry needs to recognize this expertise and dedication as well as focusing resources to help solve the riddle of laminitis.

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## Medical Treatment of Acute Laminitis:

### Questionnaire Results – 60 Responses

1) Which pharmacologic agents do you use in the treatment of acute laminitis (assume that you are strictly treating primary laminitis, and not a concurrent condition such as colitis or endotoxemia)?

Drug	Routinely use	Occasionally use	Never use
Acepromazine	35	21	5
Aspirin	7	20	28
DMSO	28	25	7
Endotoxin anti-serum	1	8	42
Flunixin meglumine	40	17	3
Heparin*	8	23	24
Isoxsuprine	5	23	25
Nitroglycerine	10	14	29
Phenylbutazone	58	2	1
Pentoxiphylline	7	22	27
Polymixin B	2	12	39
Other NSAID	4	13	18

Which? Ketoprofen (14), Meloxicam (1); Other drug types - L-arginine (2), Lidocaine (1)

2) If a prospective clinical trial were to be conducted to evaluate the efficacy of a specific drug (drug X) in the treatment of acute laminitis, which of the following drugs would you insist that the horses in the control group are treated with (horses in the treatment group would also receive this drug/these drugs plus drug X)?

Acepromazine	13	Isoxsuprine	0
Aspirin	2	Nitroglycerine	2
DMSO	11	Pentoxiphylline	6
Endotoxin anti-serum	2	Phenylbutazone	38
Flunixin	17	Polymixin B	4
Heparin*	7	Other	3

3) If such a clinical trial was to be conducted, which of the following drugs most warrant being the subject of such a study based on their potential benefit and lack of current evidence? (if more than one, please list in order of importance, with #1 being most important)

Order of importance	1	2	3	1	2	3	
Acepromazine	7	6	2	Isoxsuprine	3	2	0
Aspirin	1	3	2	Nitroglycerine	2	5	3
DMSO	14	7	3	Pentoxiphylline	3	7	8
Endotoxin anti-serum	5	3	2	Phenylbutazone	8	1	1
Flunixin	1	2	0	Polymixin B	4	2	2
Heparin*	3	3	3	Other+	5	1	2

\* Many respondents recorded LMW/fractionated heparin.

+ Also mentioned Doxycycline/tetracycline (4), piroxicam, lidocaine, promethazine.