

IGSRV

International Group of Specialist Racing Veterinarians

www.igsrv.org

Newsletter Number 4

April 2010

Editor's note

After a long break in the run up to ICRAV 2010, I would like to welcome you to the 4th edition of the IGSRV newsletter. It has been drawn to my attention that not all of you have been receiving the newsletter. In order to overcome this problem, I will be forwarding it to Brian Stewart for distribution. Please ensure that you respond when you receive the newsletter – either to Brian or me (peter.knight@sydney.edu.au). If you would like to see previous editions of the newsletter, they are available on the IGSRV website (www.igsrv.org). Please remember, your contributions are always welcome. You can send them to me by email at any time (peter.knight@sydney.edu.au) and I will ensure they appear in the next issue.

I would like record my personal thanks and congratulations to Andrew Grierson, Geoff Beresford and Rob Howitt for their efforts in organising a great ICRAV conference in Queenstown.

Chairman's Report to 13th General Meeting 18th ICRAV, Queenstown, New Zealand

I welcome you to the 18th ICRAV for what promises to be a most interesting and stimulating conference. We left Antalya, Turkey with renewed vigor, having gained knowledge and insight from the conference program, and

possibly just as valuable, shared time and close interaction with our friends and colleagues, veterinarians and chemists and their families. For those who have attended prior ICRAVS, I'm sure you can associate with my sense of camaraderie and appreciation for these meetings. I can't think of another conference that compares. We welcome new members and encourage you to absorb every hour of this busy week. The scientific program, social functions, and personal relationships, will stay with you long after we leave Queenstown.

With all the inherent benefits of the ICRAV and the proceedings generated, we must mix this with a healthy dose of reality and attempt to keep our perspective. The United States and many areas throughout the world have, and still are, facing serious financial issues since our last meeting. Racing is not immune. Many owners have reduced their stable size; racetrack management and racing authorities are actively seeking ways to cut costs through such means as travel restrictions, drug testing sampling strategies, reduced racing dates, and even job eliminations. The foal crop continues to decline, as are sales and overall wagering handles. At the same time, pressure has increased for greater emphasis on equine welfare, retirement of race horses, safer track surfaces and reducing the incidence of injuries. These are extremely difficult times for our industry, with greater demands and less money to fund initiatives and mandates.

As members of IGSRV, we must strive to maintain the highest standards for our profession and to achieve the aims as defined in our guidelines. If you are fortunate enough to attend this conference, it's because you and your racing authority recognize its value. On return home, you each must actively inform your administrators and colleagues of what was accomplished at this ICRAV. You are the representatives to carry the message and reinforce our goals – active communication with your authorities is imperative. Our industry is facing many challenges and we can be instrumental in maintaining its integrity, being proactive on welfare and doping control.

A review of this conference's scientific program is impressive by any standards. Sessions range from the promising area of biomarkers, risk assessment and analysis to reduce fatal injury, racing surfaces, TC02, managing our yearlings, to a full joint morning on the "expert witness" – a clear reflection of the increasing necessity for solid regulatory actions able to withstand legal challenge. There will be roundtable sessions on Welfare (which could easily

consume most of our time), epistaxis with Lasix certain to be a lively topic, and a variety of medication issues encountered by members and their authorities. In addition, there are 35 posters for your attention, so please take time during this busy week to review them. Personally, I'm anxious to get started. There is much to absorb from the papers, roundtables and one-on-one discussions with colleagues. The opportunities for candid discussion with delegates are priceless. Use them to the fullest.

I must speak on the topic of Prohibited Practices and IGSRV's continuing work to promote welfare practices for the race horse. This has been an active conference topic for a decade and it will remain so. As you will recall, the "IGSRV Principles for Acceptable Welfare Practices in Horseracing" was adopted at the 17th ICRAV in Turkey. It was hoped that this document would be adopted by the IFHA as an article in the International Agreement. It was presented, and though not accepted as an article, the need for a Welfare Committee and an article on Prohibited Practices was acknowledged.

IGSRV has requested that we remain an active participant and stakeholder in this process. We recognize that welfare is a broad and complex issue, but we must keep our position clearly asserted in any action by IFHA. IGSRV is the most knowledgeable, broad-based, and readily available source to assist the IFHA, and I believe we are crucial to the process.

You have received a draft document of a proposed new article in the International Agreement dealing with Prohibited Practices for your review and discussion. We greatly appreciate the efforts of Ron Jensen, Peter Symons and his working party for their work in developing the initial document in 2002. This new proposed article draws heavily from their work. We will discuss this further during the week and at our closing business session on Saturday morning. The IGSRV website, (igsrv.org) is up and running with ICRAV proceedings since 1985 available to all members. It has been slower to develop than I had hoped, due in part, to my unrealistic expectations, long distance communications between, Kentucky, Hong Kong, Australia, Dubai and New York and, of course, technical bumps in the road. We greatly appreciate the sponsorship of the Hong Kong Jockey Club, Emirates Racing Authority, the Japan Racing Association and The Jockey Club (USA) and, of course The Jockey Club Information Systems in Lexington for their invaluable technical support and time.

The major steps are completed. We will need to continue work to keep the site active, relevant, and interesting for the members and all industry participants who visit it. We want them returning to the site regularly. IGSRV owes a special thank you to Peter Symons, Brian Stewart and Eliot Forbes for their dedication to this project. Thank you gentlemen.

The IGSRV web site needs your input, so please don't hesitate to let us know your opinions and suggestions. If you haven't already received your login information, Brian will be available to assist you this week.

Three issues of the IGSRV Newsletter were produced since the last conference, due largely to the efforts of Peter Knight, with assistance from the executive committee and regional representatives. I'm sure you have found it useful and informative. A special thanks to Peter. He assures me he is willing and able to continue this project.

The ICRAV business session follows this meeting, followed by the official opening and the ICRAV Special Lecture. Enjoy the conference and this magnificent setting of Queenstown. Don't forget to thank our hosts during your stay. The organizing committee has done a commendable job. I look forward to visiting with each of you over the next few days.

IGSRV Chairman's Report ICRAV Closing Business Session – 18th ICRAV Queenstown, New Zealand – March 13, 2010

The 18th ICRAV was attended by 39 IGSRV delegates, with several additional veterinarians as speakers and guests. We were also pleased to have a large turnout of family and friends join us. The IGSRV general meeting (March 8th) had an excellent attendance of 33 members, sufficient to cause an overflow into the hallway. All subsequent veterinary sessions were moved to a larger room in an adjacent hotel.

THE EXECUTIVE COMMITTEE (EC):

Dr. Peter Forssberg has completed his term as Hon. Treasurer and Dr. Brian Stewart assumed the dual position of Hon. Secretary/Treasurer in early 2009. We thank Peter for his valuable service and contributions.

Chairman and Vice-Chairman were presented for election. These resulted with W.T. Hill and J. McCaffrey being re-elected respectively for an additional two years.

The EC is made up of the following representatives:

Dr. W. Theodore Hill (USA) – Chairman

Dr. John McCaffrey (Australia) - Vice-Chairman

Dr. Brian Stewart (Hong Kong) – Hon. Secretary and Treasurer

Regional Representatives:

Dr Eliot Forbes (Middle East & Africa)

Dr. Lynn Hillyer (Europe)

Dr. Kanichi Kusano (Asia)

Dr. Judith Medd (Australasia)

Dr. Mike Weber (Americas)

IGSRV REPRESENTATIVES:

To the IFHA Advisory Council on Prohibited Substances and Practices

Dr. Craig Suann

Dr. Rick Arthur

IGSRV representative to the ICRAV Standing Committee

Dr. John McCaffrey

IGSRV representatives to ICRAV Program Committee:

Dr. Andrew Griersen

Dr. Peter Symons

ICRAV YOUNG SCIENTIST AWARD:

The ICRAV Young Scientist award for a presentation in the veterinary program was won by Dr. Melissa Jackson from The University of Melbourne for her paper, “Radiographically Detected Orthopedic Findings in Thoroughbred Yearlings and Race Performance.” There were five candidates and the competition was very strong, making a difficult final decision for our panel. We congratulate Melissa for this achievement and commend all the presenters for their hard work.

SCIENTIFIC PROGRAM:

Twenty-five papers were presented in the veterinary sessions and additional roundtable discussions included welfare and medication topics. There was a closing roundtable on epistaxis, EIPH, and Lasix issues which offered some interesting perspectives from non-Lasix jurisdictions. NSAID's and veterinary inspection also had a good debate. All the veterinary sessions were well attended. Interesting, and at times, lively discussions were generated.

IGSRV DINNER:

The IGSRV dinner was again a popular event with 68 members and guests attending at the Botswana restaurant. It was a delightful evening of camaraderie, good food and drink – followed by a celebration to commemorate 25 years of IGSRV (though that term may not have been coined in 1985).

PROHIBITED PRACTICES AND WELFARE:

A new Prohibited Practices document was approved at the final business session. This document will be presented for consideration by the Executive Council of the IFHA as a proposed new article in the IFHA International Agreement on Breeding, Racing, and Wagering.

The following welfare motions were adopted:

The IGSRV Executive Committee will appoint a welfare working group.

The IGSRV Executive Committee will prepare terms of reference for the welfare working group.

OTHER BUSINESS:

A loan of \$3,000 was approved to assist Dr. Larry Soma and his colleagues in organizing the 19th ICRAV in Philadelphia.

Dr. Peter Knight will continue as editor of the IGSRV Newsletter, with the first 2010 edition expected shortly after the conference.

The IGSRV website currently has ICRAV proceedings from 1985. All members of IGSRV and AORC may access the proceedings through the "member's area." We are continuing to investigate options (with AORC assistance) for an affordable search engine to facilitate access.

The 18th ICRAV has more than fulfilled our early expectations and will be remembered for its program diversity, enthusiastic veterinary participation, and the warm hospitality extended during our stay in Queenstown. We are extremely

grateful to our hosts and the exceptional accomplishments of the organizing committee.

ICRAV Sponsors

Special thanks should go to all the ICRAV sponsors

Association Sponsors

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ICRAV 2012

The 19th ICRAV will be hosted by the University of Pennsylvania School of Veterinary Medicine in the historic city of Philadelphia, Pennsylvania in the week of 17th or 24th September 2012. The organisers are keeping these two options open until they select a hotel site in mid-town Philadelphia. The site will be in mid-town to allow easy transportation to the hotel and to historic and entertainment areas. They are urging participants to bring their families and friends as it is a great city to visit with easy train/bus transport to New York City and Washington DC.

It was announced at the Queenstown meeting that ICRAV 2014 will be held in Mauritius.

IGSRV Business Meetings

Proposed Prohibited Practices Article in the International Agreement on Breeding, Racing and Wagering

This article, agreed to at Queenstown, has been presented to the IFHA Executive Council.

1. OBJECTIVE

The objective is to protect the health and welfare of the horse, the welfare of the rider and other participants as well as the integrity of horseracing through the prohibition of certain specified acts and practices.

The responsibility for enforcing the regulation of any particular practice lies with the regulatory authority of individual racing jurisdictions.

2. PRACTICES THAT HAVE NO PLACE IN THE TREATMENT OR MANAGEMENT OF A RACEHORSE

- *The use of any object, device or chemical to achieve an inappropriate response, conditioned or otherwise, by causing unnecessary pain or distress to the horse at any time during training or racing.*
- *Subjecting horses to medical or surgical procedures that have not been supervised by a veterinarian, and are not consistent with providing medical and/or welfare benefits to the horse.*
- *Practices that are fraudulent, potentially fraudulent or may have adverse consequences for the integrity of the breed or the industry.*
- *Tampering by means of any physical, chemical or physiological interference with a racehorse intended to artificially modify its athletic performance in any way.*

3. SPECIFIC PROHIBITED PRACTICES

- *Racing a pregnant filly/mare beyond the time set by the authority.*
- *Withholding of water pre-race.*
- *The inappropriate use of extracorporeal shock wave therapy in a manner that may desensitize any limb structures.*
- *Gene doping techniques.*

4. ADDITIONS TO THE LIST OF PROHIBITED PRACTICES

Additional prohibited practices will be added to this list when recommended by the Federation's Advisory Council on Prohibited Substances (and Practices), after consultation with the International Group of Specialist Racing Veterinarians (IGSRV), and approved by the Federation.

Website

Work on the IGSRV website is progressing well. Proceedings of previous ICRAVs have been scanned and will be available in the Members section. This

will be password protected. Brain Stewart will forward login details in the near future. The Proceedings will be supported by a Website search engine. At present the hunt goes on for an appropriate search engine, and means of funding its costs (about \$HK120, 000) remain under discussion. It is also hoped that a PayPal facility will be available for on-line payment of the 2011 subscription.

Article 6 Amendment

A recent Australian appeal into a conviction for the use of Tranexamic Acid has potential implications for the definition of Prohibited Substances as set out in Article 6 of the General Agreement. The appeal was upheld, amongst other reasons, because the tribunal accepted the view of the appellant's expert witness that "acting" should be defined in its narrowest sense – that is requiring the binding of a drug to its receptor. The consequences of such an interpretation would be considerable. It was therefore proposed that a recommendation be put to the IFHA that Point 10 of Article 6 be revised in order to correct the problem. Since Queenstown, there has been some difficulty in reaching a consensus for the exact phrasing, but the key elements are replacing "Substances capable at any time of acting on..." with "Substances capable at any time of exerting an effect, either directly or indirectly or both...". This matter still requires further deliberation by the Advisory Council before submission to the IFHA.

FEI

Graeme Cooke, the recently appointed Veterinary Director of the FEI spoke at ICRAV. Graeme, a Cambridge graduate, has recently worked as a policy advisor to the UK Government and served for 6 months in Helmen province in Afghanistan before taking up his FEI position.

Graeme believes that integrity in horse sports is closely linked to welfare. In order to promote both, the FEI has established a Clean Sport Commission. You can find further details at its website (www.feicleansport.org).

One key FEI aim is improving education of all involved in equestrian sports, with an aim of empowering competitors to take greater responsibility for their decisions related to medication.

A number of changes will be introduced as part of the Clean Sport programme.

1. 2 year bans for doping offences.
2. Movement towards a prohibited substances list similar to that provided by WADA. Substances not on the list will be, by definition, permitted.
3. The development of a drug information database.

Rollout will occur over the next 2 years.

On March 9, the FEI issued a press release describing the consultative process to be undertaken in relation to NSAIDs.

On the occasion of its Executive Board (EB) meeting held at the FEI Headquarters today, 9 March, the FEI announced further steps in relation to the debate on in-competition use of a limited number of non-steroidal anti-inflammatory drugs (NSAIDs) under strictly prescribed limits and set the relevant timeline.

A central point in the debate will be the FEI Congress on NSAIDs Usage and Medication in the Equine Athlete which will be held in Lausanne in August. To lead the debate, the EB appointed an FEI Congress Committee chaired by 1st Vice President Sven Holmberg and composed of Chris Hodson (2nd Vice President), John McEwen (Chairman of FEI Veterinary Committee), Graeme Cooke (FEI Veterinary Director), Dr Yves Rossier, and Prof. Leo Jeffcott as members. The composition of the FEI List Group is being finalised and will be announced shortly.

The following timeline has been established:

Mid-April – the science currently available published online

Mid to end July – information will be sent out for consultation. It will reflect the policy issue of whether the FEI should allow the restricted use of NSAIDs, provided the levels are limited and are deemed by the List Group not to threaten horse welfare and not to be performance enhancing.

August (date TBC) – congress held in Lausanne

To facilitate the debate, the FEI will set up in the coming weeks a virtual platform open to the global audience. National Federations, riders, trainers, officials, event organisers, veterinarians, the media as well as the general public will be able to access the science currently available and will be encouraged to submit their contributions to the debate.

Regional Reports

Middle East – Eliot Forbes

The major development in this region has been the opening of Dubai's new Meydan racecourse, which features both a Tapeta and Turf track. The first race meeting was held on the 28th of January 2010 and meetings have been conducted at weekly intervals up to the grand opening which will be on Dubai World Cup day on the 27th of March 2010.

Opening a major project such as Meydan and beginning racing is a task not to be underestimated and whilst the design and development of the physical infrastructure is the most obvious challenge, engineering the underlying operational processes, training staff and creating awareness amongst participants of how the new or changed logistics will affect their race-day activities are also of equal importance to the success of the project.

To date all has gone relatively smoothly and the Tapeta surface is proving popular with trainers and race fans alike. It is too early to draw any further conclusions regarding the synthetic surface's safety and welfare impact on our horse population but this is being closely monitored.

For more information please visit: www.meydan.ae

Japan – Kanichi Kasano

1) The JRA has implemented a new drug control regulations effective from 1st November, 2009. 19 substances defined as "restricted drugs" have been added along to the list to the conventional "prohibited drugs". "Restricted drugs" will be regulated uniquely by JRA, whereas "prohibited drugs" are regulated by the nation's law. The JRA will suggest withdrawal times for "restricted drugs" by request. This change aims to align JRA medication rules to various measures taken by the International Federation of Horse Racing Authorities (IFHA) in order to increase harmonization of the international regulations of prohibited substances in horse racing. This information can also be found on the JRA homepage.

LIST OF RESTRICTED DRUGS

From JRA Rules
(As of November 2009)

1. Acemetacin	2. Ibuprofen
3. Indomethacin	4. Carprofen
5. Ketoprofen	6. Diclofenac Sodium
7. Sulindac	8. Dexamethasone
9. Triamcinolone	10. Triamcinolone acetonide
11. Tolfenamic acid	12. Naproxen
13. Hydrocortisone	14. Piroxicam
15. Flunixin	16. Prednisolone
17. Betamethasone	18. Methylprednisolone
19. Loxoprofen	

2) EI, which was identified in August 2007, has been eradicated from Japan. After the initial peak of infections in 2007, sporadic and independent outbreaks occurred at Breeding, Racing and Equestrian facilities in early 2008. These gradually declined, and the final domestic infection report was 1st July, 2008.

Surveillance in accordance with the OIE Terrestrial Animal Health Code was implemented for the following 12 months, with no infection reports from anywhere in the nation. As of 1st July, 2009 the Ministry of Agriculture, Forestry and Fisheries officially declared EI eradication and recovery to EI free status to the OIE.

As further precautions toward prevention of EI re-entry, mandatory testing of all imported horses is now conducted, and 2 positive findings in 2009 have proved the benefit of this system. Internally, an “early detection, rapid cure” policy has been adopted by the government, and JRA conducts EI tests on all symptomatic horses. Also, random spot checks are continually conducted as epidemiological surveillance. Vaccination strains and programs have been reviewed, and the Ibaraki strain which was isolated from the recent outbreak has been introduced to the new vaccine on market from 2009 autumn.

3) The use of rowels during racing are prohibited in principle from 1st Jan 2010. The use of whips will be aligned with IFHA guidelines.

Reports from ICRAV sessions

Welfare

Welfare and injuries featured prominently in the veterinary sessions. Sue Stover from UC Davis presented outcomes from the California Horse Racing Board necropsy program. One key point to emerge from her presentation was the value of comprehensive post mortem programmes in addressing risk. She highlighted the fact that catastrophic injuries frequently occur when bones are healing, even though the loads that are acting upon them are normal. The highest risk for injury occurs 2 – 3 weeks after a short lay-off. The appropriate race surface has enormous potential to decrease the risk of injury, but so do many other things. The racing surface may be a convenient scapegoat. In reality, many factors that are operating simultaneously contribute to injury and must be managed together.

Rick Arthur gave advice on dealing with the media. All vets working at the Breeder's Cup have received specialised media training. He emphasised the importance of being honest and forthright, and demonstrating your concern for the injured animals. He also discussed the issues surrounding synthetic tracks. The rate of catastrophic injury on these tracks, which was initially lower the rate recorded on dirt, has begun to increase in recent times. It appears that all synthetic tracks will deteriorate without appropriate maintenance, resulting in higher injury rates. An interesting article on the topic by Tracy Gantz entitled "Officials: Track Consistency, Maintenance Key", appeared on Bloodhorse.com on March 15, 2010. Rick recommended a supplement on synthetic tracks that first appeared in The Blood-Horse magazine. It is available at:

http://www.bloodhorse.com/pdf/synthetic_surfaces_special_report_120807.pdf

A Welfare roundtable was held later in the week. There was general agreement that welfare is the moral responsibility of official veterinarians, although official means of addressing it within the regulatory veterinarian's responsibilities are less clear in some jurisdictions. The roundtable identified the following key issues:

- Tracks
- 2 year old racing
- Unsuccessful animals / Breeding from poor performers

- Drugs
- Breakdowns
- Whips
- Jumps racing
- Retirement
- Gastric ulceration
- Confinement of horses in stables
- Upper respiratory tract surgery
- Slaughter

This issue was discussed at the Australian Racing Industry Conference held in Sydney on 15 April. The following additional items of concern were identified:

- Foot quality/shoeing
- Abuse of the bit / tooth care
- Quality of track riders and their treatment of horses / general 'horsemanship' of industry participants.

In thinking about these problems it is important to determine whether they are genuine welfare issues or public perception problems – which can be best done by asking why a particular problem is a welfare issue.

These lists are unedited. Every suggestion has been recorded. If you would like to add anything to the list please send the details to me at peter.knight@sydney.edu.au. I will provide an updated list in the next newsletter.

The Expert Witness

Friday morning featured a joint session on the expert witness.

Chris Lange, a leading New Zealand barrister opened discussions. He believes that “there is more to being an expert witness than being an expert”, and that all expert witnesses need to understand the rules of the tribunal and how to engage with it. He described the expert’s overriding duty to the assist the tribunal impartially, always remembering that their paramount duty is to the court and not the person retaining them.

He divided the evidence and expert may give into two types – factual and opinion. When giving opinions, experts should

1. define their area of expertise;
2. set out to the tribunal the areas that have been asked to address;
3. set out the facts upon which the opinion is based; and
4. set out fully any qualifications to the opinion being expressed.

When considering the facts described being used to formulate the opinion, it is important to ask

1. has a scientific theory been tested and published;
2. can it be applied to this particular area; and
3. has the theory been generally accepted?

Experts also need to ensure that the advocate understands the evidence they will be giving. Lawyers need to become “experts for a day”. A useful hint is to watch the tribunal members while giving evidence. If they look confused the expert should stop and ask “does that require further clarification”.

When dealing with cross examination he recommended

1. not taking anything personally
2. listening carefully to the question, thinking about the answer; and
3. making any concessions that are necessary.

If you know the other side is calling an expert witness it is very useful to set up an expert witness conference to establish common ground.

He referred the conference to a paper presented by Lord Justice Leveson which can be accessed at:

<http://www.judiciary.gov.uk/docs/speeches/spj-forensic-experts-05112009.pdf>

Scott Waterman provided an overview of the Racing Official’s Accreditation Program (ROAP) which is currently operating in the USA. ROAP recently held a seminar on the expert witness. A video recording of the seminar will soon be available on the RMTc website (<http://www.rmtcnet.com>).

John Vine and Terry Wan expounded on their practical experiences as expert witness – experiences that were remarkably similar. There was a great deal of common ground in what they were suggesting. In particular, both stressed the importance of staying within your area of expertise when giving expert evidence, and not being forced into giving “yes or no” answers. Of course, much of our time is spent in inquiries.

Terry listed the typical defence arguments that are used:

1. the sample is not from my horse
2. the sample was contaminated during collection or analysis
3. the sample is a false positive
4. the drug in question is an inadvertent or accidental contaminant (always ask “is it a common contaminant?”); and
5. the concentration is insignificant or would have negligible effects.

Common defence tactics are:

1. to demand all information, or to undertake a ‘fishing trip’ looking for something that may raise doubts (WADA does not require that positive analyses be supported by SOPs);
2. to submit lengthy, convoluted, pseudo-scientific arguments very late (always ask for whatever time is needed for you to fully understand the submission);
3. to use supplied data out of context;
4. to demand to witness all procedures; and
5. to insist on the detection of metabolites.

In discussion Chris Lange suggested that veterinarians working with the stewards on inquiries should set up a code of conduct that is presented to the stewards, explaining to them exactly how we will behave. He also suggested that stewards should be given relevant materials to read and any education required to make them “experts for the day” before the inquiry commences.

Welfare and Safety Summit June 28-29, 2010, Keeneland

Coordinated and underwritten by The Jockey Club and Grayson-Jockey Club Research Foundation and hosted by Keeneland Association, the summit is a two-day workshop designed to explore ways to enhance the safety and soundness of the Thoroughbred racehorse. Approximately 60 individuals, including jockeys, trainers, owners, breeders, veterinarians, scientists, track superintendents, racing officials, educators, farriers, industry leaders and racetrack management personnel, have been invited to participate.

The strategic plan and recommendations that came out of the original summit, presentations, research articles, committee updates, and other

information can be found on the Welfare and Safety of the Racehorse Summit website, grayson-jockeyclub.org/summit.

Latest research

Exceptional running skill in dogs requires extensive experience.

This study examined changes in running performance in 14 elite greyhounds. The time to peak performance from initiation of a professional career took up 9.1% of a typical dog's lifespan. This amount of time devoted to skill development relative to species lifespan is similar to that of elite human track runners. Even with control for changes in size (weight in kilograms), dogs' skill development showed marked improvement with increasing race experience.

Helton, WS (2009) Exceptional running skill in dogs requires extensive experience. *Journal of General Psychology*. 136(3):323-32

Anti-inflammatory effects of intra-articular morphine

In this study, 8 horses received 2 treatments 4 hours after synovitis was induced by injection of lipopolysaccharide into a radiocarpal joint. The first was an IA administration of morphine (0.05 mg/kg) with IV saline, and the second an IA administration of saline with IV morphine. Treatments were administered in randomized order with a washout period of 3 weeks between treatments. IA administration of morphine resulted in significantly less joint swelling and lower synovial fluid TP and serum and synovial fluid serum amyloid A (SAA) concentrations, and blood WBC count than did IV administration of morphine. The authors concluded that IA administration of morphine exerted anti-inflammatory properties in horses with experimentally induced acute synovitis, supporting its use as a part of a balanced analgesic protocol.

Lindegaard C. Glerup KB. Thomsen MH. Martinussen T. Jacobsen S. Andersen PH. (2010). Anti-inflammatory effects of intra-articular administration of morphine in horses with experimentally induced synovitis. *American Journal of Veterinary Research*. 71(1):69-75.

Effects of platelet-rich plasma on repair of equine superficial digital flexor tendons

This paper reports a placebo-controlled experimental trial that was performed to test the hypothesis that a single intratendinous platelet-rich plasma (PRP)

treatment enhances the quality of tendon repair. Tendon lesions were created surgically in the Superficial Digital Flexor Tendons (SDFT) of both front limbs, one of which was treated with PRP and the other with saline. After 24 weeks, the tendons were harvested for biochemical, biomechanical, and histological evaluations. Collagen, glycosaminoglycan, and DNA content (cellularity) was higher in PRP-treated tendons ($p = 0.039$, 0.038 , and 0.034 , respectively). The repair tissue in the PRP group showed a higher strength at failure ($p = 0.021$) and Elastic Modulus ($p = 0.019$). Histologically, PRP-treated tendons featured better organization of the collagen network ($p = 0.031$) and signs of increased metabolic activity ($p = 0.031$).

Bosch G. van Schie HT. de Groot MW. Cadby JA. van de Lest CH. Barneveld A. van Weeren PR. (2010). Effects of platelet-rich plasma on the quality of repair of mechanically induced core lesions in equine superficial digital flexor tendons: A placebo-controlled experimental study. *Journal of Orthopaedic Research*. 28(2):211-7.

Gender affects gene expression in GH doping

Seven men and thirteen women were administered GH for 8 weeks. GH induced 353 changes in gene expression in women and 41 in men. The false discovery rate using this method was less than 5%. None of the differentially expressed genes were common between men and women. Quantitative RT-PCR for seven target genes showed good concordance between microarray and quantitative PCR data in women but not in men.

Mitchell CJ. Nelson AE. Cowley MJ. Kaplan W. Stone G. Sutton SK. Lau A. Lee CM. Ho KK. (2009) Detection of growth hormone doping by gene expression profiling of peripheral blood. *Journal of Clinical Endocrinology & Metabolism*. 94(12):4703-9.

Transmission of influenza from dogs to horses

During the 2007 equine influenza outbreak in Australia, respiratory disease in dogs in close contact with infected horses was noted; influenza (H3N8) virus infection was confirmed. Nucleotide sequence of the virus from dogs was identical to that from horses. No evidence of dog-to-dog transmission or virus persistence in dogs was found.

Kirkland PD, Finlaison DS, Crispe E, Hurt AC. (2010) Influenza virus transmission from horses to dogs, Australia. *Emerg Infect Dis* [serial on the Internet]. April
<http://www.cdc.gov/EID/content/16/4/699.htm>