



International Group of Specialist Racing Veterinarians

Pre-ICRAV Newsletter

Reviewers needed for veterinary papers for the ICRAV Proceedings

The ICRAV Proceedings will be self-published this year, using the model so successfully implemented for the Queenstown ICRAV of 2010.

To ensure the quality of the Proceedings we need to have a high quality manuscript review process.

We are hoping to get eight volunteer veterinary reviewers so that each reviewer will have a maximum of 5-6 papers to assess. Both attendees and non-attendees are very welcome to participate.

Could you please assist us with this important task?

If so, please contact either:

Peter Symons kptg@globaldail.com or

Peter Knight peter.knight@sydney.edu.au

by Friday August 22.

Certificate of Attendance

For many attendees, the ICRAV represents an important opportunity to fulfil professional development requirements. For that reason, the organisers will produce a Certificate of Attendance that will be printed and placed in your conference package if you request it.

To request a certificate please contact Peter Symons kptg@globaldial.com by Friday September 5.

It will not be possible to produce certificates after this date.

IGSRV Business Meeting

(Opening – Mon 22 Sept; Closing – Sat 27 Sept)

Agenda

- 1. Introduction/Welcome**
- 2. Chairman's Report**
- 3. Secretary's Report**
- 4. Treasurer's Report**
- 5. Minutes of Previous Meeting**
- 6. Action Taken**
- 7. Regional Reports**
- 8. New Matters**
 - 8.1 Issues raised in IGSRV Chairman's Letter, dated 9 January 2014 (Peter Symons)
 - 8.2 Opinions re: PETA Video titled *Horse Racing's Daily Double: Drugs and Death*
 - 8.3 The use of Gonadotrophin Releasing Factor vaccine for immunological castration (Roland Devolz)
 - 8.4 Endorsement of the proposed Article 6 D of the International Agreement on Breeding, Racing and Wagering
 - 8.5 Hydrocortisone threshold (pre-race and post-race)
 - 8.6 Establishing an international database and benchmarking system for racing injuries and incidents

- 8.7 Appropriate allocation of IGSRV funds
- 8.8 The role of official racing veterinarians in racing administration
- 8.9 Responsibilities/Duties of IGSRV Regional Representatives (see draft)
- 8.10 Making IGSRV membership more relevant to members/regional authorities (Peter Symons/Kanichi Kusano)
- 8.11 International threshold for cobalt

9. Election of Office-Bearers

8.1 Extracts from Chairman's letter 9 January 2014

With the next International Conference of Racing Analysts and Veterinarians (ICRAV) rapidly approaching and with the racing industry facing ever increasing pressures and threats to its survival, many of which are have their base in horse welfare and the integrity of racing, it is appropriate that we, as Group, reflect on our current position and where we would like to be in five years time. I think there are some critical challenges and facts that the industry and veterinarians in particular must accept and become even more proactive in addressing;

- Racing faces existential threats on many fronts.
- The horse is the industry's base and its unique selling proposition.
- If the public do not perceive that 'the horse comes first' within the industry, racing will continue to be marginalized as a sport and as a business.
- The veterinary profession must be at the forefront of ensuring that the horse does indeed, come first.
- A minority of veterinary practitioners are much more part of the problem than part of the solution to many of the safety, welfare and integrity problems faced by the industry.
- Veterinary regulators must lead both the veterinary profession and racing administrators by education and policy development to change the culture of racing from one in which performance is perceived to come from the end of a hypodermic needle to one in which producing a sound, healthy, happy and drug free athlete becomes a competitive advantage for an individual horse trainer.

The IGSRV has long been committed to these objectives and we have made considerable progress. The past year has seen the International Federation of Racing Authorities (IFHA) and many nations adopt a complete ban on the use of anabolic steroids in training, something that was unimaginable even a decade ago. Great progress has been made on formulating the principles of the control of the genetic manipulation of racehorses and on the control of medication and doping in training. The implementation of controls on the abuse of intra-articular corticosteroids by the introduction of a compulsory stand-down period to encourage

judicious and appropriate use of these powerful medications is well advanced in many jurisdictions.

8.9 Draft: Responsibilities/Duties of IGSRV Regional Representatives

Send a quarterly report to the IGSRV vice-president (currently Dr K Kusano) at the end of each January, April, July and October.

Include in each report details of:

- Any IGSRV-related meetings/discussions/email-outs
- Any issues/challenges involving medication, drugs, welfare,
- Members contacted
- Any potential new members contacted

IGSRV Regional Representatives should, for their region:

- Document and supply details of all current IGSRV members
- Contact any new, potential IGSRV members and encourage and assist them to join the IGSRV (and supply their contact details esp email address)
- Develop a professional relationship with any veterinary acquaintances i.e. practitioners who have some part-time regulatory duties.

IGSRV Member Survey

At the time of writing, a total of 38 responses to the IGSRV Member Survey had been received. The complete results can be found at the end of this newsletter.

Summary findings

Questions with greater than 80% agreement (total of agree and strongly agree)

- The trainer should be fully responsible for presenting horses under his / her charge in a suitable condition to race. 100.0%
- There is a risk in permitting use of compounded medications in racehorses due to possible contaminations and variations in formulations and quality control between compounding pharmacies. 94.7%
- Special training in race track regulatory practice is desirable. 94.6%
- Training and racing horses as two year olds is actually beneficial for the adaption of the musculoskeletal system to the demands of racing if is performed with a suitable level of care and respect for the horse's physiological adaption to training. 92.1%
- Racehorses should be provided with all the benefits of modern medicine during training under the supervision of a veterinary practitioner. 89.5%
- The use of the whip is a significant public perception problem for the racing industry.

- 89.2%
- The perceived abuse of medication in training is a significant concern to the general public and reflects badly on the racing industry. 86.9%
- Structuring of the racing program is an effective means of limiting the physical demands placed on young horses and in assisting in the appropriate adaption of their musculoskeletal system. 84.2%
- There is legitimate need for the use of medications that are not registered in horses and such off-label use is justified when the prescribing veterinarian feels no other alternative medication exists. 81.6%

Questions with greater than 80% disagreement (total of disagree and strongly disagree)

- It is pointless and counterproductive to racing integrity to attempt to control substances and procedures that cannot be detected by analytical methods. 92.1%
- Any restriction on a practitioner's freedom to administer intra-articular corticosteroids according to his or her clinical judgement by extended stand-down periods and / or detection times is not in the best interests of horses, owners and the racing industry. 89.5%
- Racehorses often become dehydrated close to the time of racing and benefit from intravenous fluid administration on the day prior to racing. 86.9%
- Regulatory veterinarians are officious bureaucrats who have often failed in veterinary practice. 86.5%
- Given horses are not fully mature until at least five years old it is unreasonable to expect them to perform at an elite level of athletic competition until that age. 84.2%
- Race day medication is an acceptable and humane means of managing the demands of the racing industry and the inevitable problems caused by occupational diseases of equine athletes such as EIPHS and osteoarthritis. 81.6%
- Training and racing as a two year old is psychologically damaging to the horse. 81.6%
- Anabolic steroids are legitimate hormone replacement therapy in geldings. 81.5%

Questions with the greatest uncertainty (not sure responses)

- There is a significant probability that the EIPH syndrome is heritable to some extent. 43.2%
- Two year old racing without the use of whips is a reasonable compromise between the welfare of the horse, the need to provide appropriate adaption of the musculoskeletal system and the financial demands of the racing industry. 36.8%
- Racing authorities have a moral obligation to provide for the care of all ex-racehorses. 34.2%
- The current horseracing wagering clientele will accept stricter controls on the use of the

whip and will not significantly change their wagering practice if stricter controls are enforced. 32.4%

- Nasal strips are a useful means of ameliorating the EIPH syndrome. 32.4%
- Compounded medications have a necessary role in racehorse veterinary medicine and are used judiciously by racetrack practitioners. 30.0%
- There are sufficient good homes available for ex-racehorses. 30.0%

Requests from members for discussion at ICRAV

Roland Devolz asks members to turn their attention to the topic of immunocastration. Roland is very concerned about potential consequences for racing, both in terms of the impact on the weight allocated to horses competing in weight-for-age races, and for the potential implications for breeding. He is also concerned that there is a serious public relations risk associated with the practice.

Patricia Ellis has asked for a discussion of the experience/methods used in various countries to [politely] counter welfarist based attacks. This has been scheduled for 4.30 pm on Friday afternoon.

News from around the world

Japan

Fumiaki Mizobe, Kanichi Kusano (Japan Racing Association: JRA)

Out of Competition Testing (OCT) is now conducted in many racing authorities. Article 6E of the International Agreement on Breeding, Racing and Wagering states that Racing Authorities will at their discretion carry out testing for prohibited substances at any time in the career of any horse with a particular aim to regulate long acting drugs such as anabolic steroids, and drug abuse during training period.

OCT was implemented by JRA on April 1, 2014. To date, 1,798 horses have been tested with no positives identified. Should horses test positive in OCT it will be barred from racing for a period determined by veterinary officers and stewards based on the substances detected and any other relevant circumstances.

The Hidaka Horse Breeders Association (HBA) started OCT this summer. The HBA aims to promote OCT in the breeding and rearing stages of a horse's career. At this year's horses in training sale hosted by HBA, OCT was implemented for the first time on 183 horses. All the horses tested were negative. Had a horse failed the test, it was to be excluded from the sale. Other sales providers are now interested in conducting OCT. It is hoped that the notion of OCT will spread further through the racing to breeding industries.

United States

Ted Hill has provided an updated version of an article he published several years ago that provides an insight into how policies can have unexpected consequences.

Good intentions

The road to hell is paved with good intentions. With time, we can often see the wisdom in this familiar axiom. As we reflect on events in racing in recent years, an image of misdirection becomes clear. The supporters of therapeutic medication had only the best of intentions. It all seemed neatly justified and relatively benign.

Racing on predominately dirt surfaces, in all weather and track conditions, placed physical demands on American horses far beyond those experienced by their international counterparts. Horses raced more often and the resultant musculo-skeletal insults were preventing them from performing to their inherent ability. The injuries were minor to moderate, of course, nothing serious requiring surgery or extended rest for proper healing. After all, human athletes were supported by advances in sports medicine. Horse racing should have the benefit of newer, reportedly innocuous medications, particularly as they are beneficial and not intended to affect performance.

Phenylbutazone, a nonsteroidal anti-inflammatory drug (NSAID), and some prednisone or similar cortico-steroid to reduce inflammation in aching joints, tendons and ligaments would simply help them withstand the rigors of frequent racing. As more NSAIDs were developed, veterinarians could select the one or more deemed most effective based on clinical experience and preference. Flunixin (Banamine) proved particularly useful in assisting many hard-knocking campaigners through another race. Muscle relaxers, bronchodilators and even some vaso-active drugs and tranquilizers to quiet the nervous horse eventually found their way to the growing list of therapeutics.

Any discussion of this nature would be remiss without including Lasix (Salix). Exercise induced pulmonary hemorrhage (EIPH) is a subject beyond the scope of this brief overview, but its treatment may be the quintessential example of good intentions gone awry with therapeutic medications. Throughout the 1980's, the New York Racing Association (NYRA) tracks had approximately 25,000 starts each year. The number of bleeders with hemorrhage visible at the nostrils never exceeded 60 a year. Clearly, many more experienced episodes of EIPH that were not visible on the track. The fiberoptic endoscope facilitates examination of the upper respiratory tract and determination of blood not visible at the nostrils, but the degree of pulmonary hemorrhage sufficient to impair performance still eludes us.

Furosemide, commonly known as Lasix, a diuretic promoted to alleviate or prevent bleeding, became an accepted race-day treatment throughout the country. New York was the final jurisdiction to permit Lasix in September of 1995, just in time for The Breeders Cup at Belmont

Park. The argument seemed strong enough at the time. Research had demonstrated that most thoroughbreds bleed at some point in their career, even if the amount is quite small based on endoscopic examination. Horses were bypassing New York to race in states that allowed race-day Lasix. Management would benefit from increased field sizes and overall handle, the horsemen and veterinarians would be satisfied, and of course, the horse would benefit. Roughly 95% of all starters at the NYRA tracks now race with Lasix, and the costs of its regulation are substantial. Lasix is administered by an official NYRA veterinarian; it is given intravenously within a specific dose range and time frame. Track employees must be dedicated to confirm bleeder certificates, program information and treatments at the appropriate times. From the patron's perspective, Lasix information is considered quite valuable for handicapping. The notion that Lasix improves performance, particularly for horses on it for the first time, is well established. Whether due to controlling EIPH or simply the significant water weight loss shortly before racing, is immaterial to the bettor. The end result is the only thing relevant. If the research and recommendations are valid, one must wonder how so many horses managed without Lasix in New York for so long. Since its legalization, the average field size has not increased, nor have the number of starts per year or total career starts. Ultimately, the public must be assured of the integrity of the race, that no horse has an unfair advantage for any reason. In that regard, it is essential that therapeutic medications be strictly regulated, and here in lies the rub. There has never been agreement on how to effectively achieve this control. Commissions had to establish a post-race urine and/or blood concentration as an acceptable level for each drug, below which there was reasonable confidence of minimal or no direct effect on performance. Levels exceeding that limit would be considered a violation and initiate regulatory action. This was much easier said than done. There was little or no science on which to base these determinations, and the laboratories strained their resources to keep pace. However, due to the paucity of information, testing methods varied widely, and there was open disagreement among racing commissions and laboratories. Many racing laboratories simply did not have the resources or expertise to accurately monitor these medications. To avoid the expense and embarrassment of legal challenges, it was often convenient to look somewhat less critically at each sample. In some jurisdictions, the use of liberal combinations and amounts of these drugs became de facto standard treatment. There was little or no consequence, except to the horse. Banamine at high doses close to race time was well known to be a very effective pain reliever for sore horses. Lower doses of two or more NSAIDs, could be quite effective and still avoid detection as excessive medication. Though the individual drug concentrations in the post-race samples would not exceed permitted limits, clinically the combination would produce a synergistic effect of marked analgesia.

Who was hurt by this pervasive movement toward more medication in the guise of therapeutics? The racing public and the industry as a whole have been damaged, but the real loser has been the horse, the very one we started out to help. Too often, controlled medication translated into detrimental results, with further damage to joints and soft tissues. In some cases, these injuries were career ending or worse.

Certainly, the intentions were only to help the horse and industry, but here we are nonetheless. It took a number of years to reach this point, and it will take quite a few more to correct it. A comprehensive effort by the Racing Medication and Testing Consortium is currently underway to define and provide informed direction for the use and control of medications in the racehorse. Though progress may be slow and at times frustrated by well-entrenched beliefs and resistance to change, even initial small accomplishments by the Consortium will significantly benefit the racing industry. More importantly, its success is paramount for the health and well being of horses training and racing today and the long-term future of the breed.

Hopefully, this effort will methodically pave a road in the proper direction.

South America

Federico Tomé (Jockey Club Argentino) writes that South American racing has now established a Medications and Laboratories Committee with representation from veterinarians and chemists. The committee has been established under the auspices of the Organización Latinoamericana De Fomento Del Pura Sangre De Carrera (OSAF; Latin American Development Organisation of Thoroughbred Racing). The Committee's mission is to seek regional alignment for eliminating the use of prohibited substances and control in the ethical practice of therapeutic medication in Thoroughbred horses in breeding, training and competition, and to improve animal welfare and transparency. The committee will meet to share and compare sampling protocols, to discuss statistics and different technologies for the monitoring and detection of substances, and to evaluate the factors affecting withdrawal times of therapeutic drugs. The committee will develop policies in agreement with the guidelines recommended by the IFHA region.

Unfortunately Federico will not be at Mauritius.

Teresita Zambruno from Argentina will be ICRAV. She asked that members be made aware of the following.

- The use of furosemide has been banned in G1 and G2 Races in Argentina since 2013. In 2015 the ban will be extended to cover all **Black Type** races (G1, G2 G3 and Listed).
- Argentina will applying penalties for the use of Anabolic Steroids in 2015. Currently

meetings are being held to establish a date to start applying this policy, and detection techniques across the three major South American analytical laboratories will be harmonised. Blood sampling will be added to urine testing in Group and Listed races.

OSAF PRESENTATION

Dr. Mayra Frederico (BRZ) and Dr. Rita Rocca (URU)

OSAF (South American Organization for the Development of Thoroughbreds) is a regional body representing Racetracks, Jockey Clubs, Stud Books, Breeders and Owners Associations from Latin America.

OSAF's mission is to promote harmonization and integration and to safeguard the welfare of the Thoroughbred breed through the fair practice of horseracing within Latin America. The OSAF aims to strengthen the regional industry and promote exchange with the major racing nations worldwide, and to comply with the Regulations set by the International Federation of Horseracing Authorities.

OSAF features 13 racetracks amongst its members: racetracks from Argentina, Brazil, Chile, Mexico, Panama, Peru and Uruguay, with Thoroughbreds travelling to compete within the region, and at the major International Group races.

OSAF also conducts the "LONGINES Gran Premio Latinoamericano", which is the major Group 1 race in all Latin America. The race was first held in March 1981 at the Hipódromo Nacional de Maroñas, Uruguay, with the venue rotating each year.

In order to fulfill its mission, OSAF has a number of Technical Committees, each of which addresses particular aspects of the horseracing industry, including Ratings, Medication, Registrar matters, and International Movement of Horses. OSAF's Committee of Medication and Laboratories brings together the official veterinarians and analysts of OSAF member racecourses, who meet biannually in order to address local and regional issues.

To date the OSAF Committee has organized 4 South American Meetings (2009, 2011, 2012 and 2014) with an attendance of more than 100 official racing chemists and veterinarians - featuring the remarkable participation of foreign specialists as invited speakers: Prof. Edward Houghton, Dr. Roland Devolz and Dr. Thomas Tobin; lectures by regional specialists, and Round Tables.

Amongst the issues addressed during these meetings, were:

- Physiology and regulation of forbidden substances (anabolic steroids, corticoids).

- Effects of Furosemide.
- The importance of Medication Harmonization Policies amongst the main racing nations
- Sampling at laboratories and custody chain.
- Inter-laboratory harmonization, local difficulties, standards, legal and customs matters.
- Comparison between different technologies for the control and detection of forbidden substances.
- Positive results and newly found drugs. Testing policies.
- Withdrawal times; Detection limits and International Screening Limits
- Screening methods/Elisa tests;
- Thresholds for therapeutic medications;
- Environmental substances/pollution;
- Importance of the interlaboratory-cooperative test in certifications
- Medicating at the Stud: handling of medication, administration, frequent problems.
- Statistics in racing and training centers: medication, bleeding, lesions.
 - Control: prior to racing and in-between days

Accidents in racing:

From a survey carried out in 6 member racetracks (Palermo, San Isidro, La Plata, La Punta, Club Hípico de Santiago and Maroñas) during 2012, where a total of 80,138 runners competed, a total of 194 accidents were reported (0.24% of starters).

From a survey carried out in 10 member racetracks (Palermo, San Isidro, La Plata, La Punta, Club Hípico de Santiago, Gavea/Rio de Janeiro, Cidade Jardim/Sao Paulo, Hipódromo de las Américas/Mex, Presidente Remon/Pan, Maroñas and Monterrico) during 2013, where a total of 160,233 runners competed, a number of 1,064 accidents were reported. This means a percentage of (0.66% of starters).

Accidents in training:

From a survey carried out in 5 member racetracks (Palermo, San Isidro, La Plata, La Punta and Maroñas) during 2012, of a total population of 6,689 Thoroughbreds in training, a number of 48 accidents were reported (0.72% of horses).

From a survey carried out in 3 member racetracks (San Isidro, La Plata and Maroñas) during 2013, of a total population of 5,550 Thoroughbreds in training, a number of 62 accidents were reported (1.22% of horses).

Doping statistics:

Resulting from the information reported by 8 member racetracks surveyed (San Isidro, La Plata, La Punta, Jockey Club Brasileiro, Club Hípico de Santiago, Hipódromo Chile, Hipódromo Monterrico and Hipódromo Maroñas), the statistics for 2013 and first half of 2014 (January 1st to May 31st), are as follows:

From a total number of 13,840 races in 2013, a total 20,377 Thoroughbreds were sampled, with 175 positive results (0.86% of tests positive).

From a total number of 4,774 races from January 1st till May 31st 2014, a total 8,606 Thoroughbreds were sampled, with 71 positive results (0.82%).

Our Opportunities:

Latin America's natural resources and the extension of its surface provide a beneficial environment to promote the development of the industry and breeding of high quality Thoroughbreds.

Our Challenges:

To achieve harmonization within our region, with similar statistics amongst each of the member countries, both in lesions as in the detection of forbidden substances.

Malaysia

Alistair Murdoch from the Perak Turf Club won't be in Mauritius but wishes everyone a very enjoyable conference. The Malayan Racing Association is moving to ban the use of all anabolic steroids in the MRA circuit from 1.8.15. Singapore Turf Club has already withdrawn their use to comply urgently with international racing standards.

In light of the criticism Australian horse racing has been receiving from horseracingkills.com, Alistair offers some of his experiences from Asia for thought on perhaps more proactive use of vets in the field before and on race day.

- All horses entered to race here are subjected to a vet exam prior to acceptances. ie Wednesday for Saturday. The use of thermography at this stage has been useful to evaluate many concerns.

- All horses are subjected to a trot-up and visual exam for condition scoring and injury / illness before being saddled pre race.
- All horses subjected to a post race vet exam at the request of the Stipendiary Stewards are subjected to an immediate rhinolaryngoscope exam. While a low grade of EIPH is tolerated in older horses, the presence of a significant amount of blood will require the horse to undergo a trial and a post trial endoscope exam before being allowed to be entered to race.

Our statistics show that these measures have halved our cases of sudden death, FMSI and incidence of "bleeding" making the extra effort worthwhile. For the profession to be able to claim some progress in health welfare and safety issues, improving statistics offer some solid evidence.

Middle East

David Sykes

Emirates Racing in the UAE open a new race track in 2014 in the provincial city of Al Ain in the Abu Dhabi emirate .This brings the total number of tracks in the UAE to five. For the first season this track at Al Ain, was a synthetic equestrian surface, however during this off season it is being converted to a dirt track. The synthetic Tapeta surface at the Meydan racetrack is also being removed during the off season and will also be replaced by a dirt surface.

Anabolic and Androgenic Hormones were banned under the ERA rules of racing during the season Sheikh Mohammed bin Rashid al Maktoum has taken the stance and a royal decree has been passed making it an offence to prescribe ,administer, transport or store any Anabolic or Androgenic Hormones for any equestrian sport in the UAE.

At the commencement of the last racing season the Dubai Equine Forensic Laboratory installed a Beckman DxC 600 analysis unit specifically for TCO₂ testing and to bring it in line with international protocols and standards .Over 50% of the racing thorough bred population were tested prerace during the last season and 25% of the racing Purebred Arabians During the season the Bahrain racing authorities extended their use of the Dubai Equine Forensic Unit facilities and commenced prerace testing for TCO₂ at races held at the Rashid Equestrian and Horseracing Club in Bahrain.

Pre race TCO₂ testing in Saudi Arabia has been in progress for the last 2 seasons at the Riyadh Equestrian Club. Here the protocol involves using a number of Idexx analyses machines in parallel and resampling horses with suspiciously high results several times prerace Horses are withdrawn from racing if they return samples over 37 mmol/ml. There was a presentation outlining this process at the Stewards meeting at the just completed Hong Kong Asian Racing Conference and further details can be taken from that web site.

Cobalt survey testing was undertaken by the Emirates Racing Authority on both race day and non race day thoroughbred and Pure Bred Arabians .Plasma samples were sent to Terry Wan at the Hong Kong Jockey Club Racing Laboratory for analysis and the results of both breeds are part of Terry's ongoing research in pursuit of relevant screening levels .

Qatar, Dr Thiago Reis Ribeiro da Luz will be presenting at the ICRAV meeting as part of the Young Scientist Award a presentation on his 4 years in Qatar and out lining the changes he has instigated there so far.

Australia

Judith Medd

Intra articular corticosteroid treatment standdown period

A horse that has been subjected to an intra-articular administration of a corticosteroid preparation, whether the preparation is administered alone or in combination with other preparations, is ineligible to participate in any race, official trial or jumpout at any time during the 8 Clear Days following midnight on the day of the administration.”

A Clear Day is defined within the Rule to mean a twenty-four hour period from 12:01 a.m. to 12 midnight. For practical purposes, a clear day restriction means that the calculation of the number of days for which the procedure/treatment is banned does not take into account the day of treatment nor the day of racing. As such a stand down time of 8 clear days equates to 10 regular days when including the day of administration and the day of racing. For the purpose of the rule and by way of example, if a horse was subjected to an intra-articular administration of a corticosteroid at any time on a Monday (1st day of the month), that horse would be ineligible to race until the Wednesday of the following week (10th day of the month). Similarly, a horse treated with an intra-articular corticosteroid on a Thursday is ineligible to race until the 2nd Saturday after treatment. The minimum stand down time is intended as a minimum period before racing within which any corticosteroid preparation must not be administered intra-articularly, including the shorter-acting corticosteroids. This stand down period must not be confused with the recommended “withdrawal” time of the particular drug used. The “withdrawal” period for a prohibited substance is calculated to ensure a horse is presented clear of the prohibited substance when sampled. In certain situations, specifically for longer acting corticosteroid preparations such as methylprednisolone and for injections into low volume joints such as the lower hock joints, the recommended “withdrawal” period may be much longer than the minimum stand down time prescribed by AR.64M, and as such must continue to be observed.

Anabolic Steroids

The Australian Racing Board (ARB) has introduced new Rules completely banning the use of anabolic steroids in thoroughbred racehorses, effective from 1 May 2014.

The rules ban the use of "anabolic androgenic steroids" in Thoroughbred horses at any time from birth until retirement. There are no therapeutic exemptions of any kind. The ban applies to all unregistered and registered racehorses until their retirement as a racehorse. Horses of any age can be tested at any time and this includes when spelling and in training and racing. Further, any person who either administers or attempts to administer an anabolic androgenic steroid to a thoroughbred horse at any time commits an offence under these rules.

The possession of any anabolic androgenic steroid, including oral paste preparations such as Nitrotrain, at any premise used in relation to the training and racing of horses will be considered an offence under the new rules. Further any person who either administers or attempts to administer an anabolic androgenic steroid to a thoroughbred horse at any time commits an offence under these rules.

Racehorse retirement

Eliot Forbes

Recognising the importance of the animal welfare and in particular the issue of race horse retirement, the Australian Racing Board (ARB) appointed a subcommittee dedicated to this important topic. The committee, comprising representatives from racing jurisdictions across Australia, was chaired by one of its directors, Dr Eliot Forbes of Tasracing and began its work in May 2013.

The committee has provided advice to the ARB on a wide range of race horse retirement matters and the Board passed a number of resolutions that are designed to optimise welfare outcomes for retired racehorses. In doing so, the Board acknowledged the pivotal role that state jurisdictions have in implementing local strategies to encourage demand for retired thoroughbreds in equestrian and other pursuits and recommended that states engage in strategies to improve the awareness and perception of the racing industry's initiatives related to racehorse retirement.

The Board approved a new rule [Australian Rule of Racing (AR) 64JA], which requires the managing owner of each racehorse to advise the reason for their horse's retirement and their plans for the horse beyond its racing career.

Owners will indicate whether their racehorse was retired due to illness, injury, for breeding purposes or at their request and whether the horse will be re-homed as an equestrian or pleasure horse, enter an official retirement program or be sent to a livestock sale. In addition to the new retirement of racehorse rule for owners, the rule requiring trainers to notify authorities of the death of a racehorse in their care has been strengthened. Trainers will also be

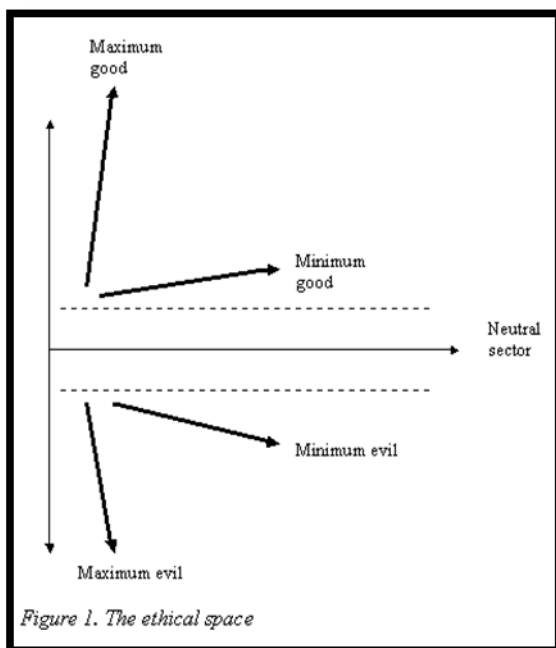
asked to inform authorities of the cause of the death.

The changes will provide the industry with greater insight into the reasons why horses conclude their racing careers, as well as their activities post racing, thus supplying statistics which can be used to better direct education and welfare initiatives.

The Role of Regulators in Racing’s Ethical Dilemma: An excerpt from Seminar on The Business and Ethics of Racing 8 August 2013, Racing Victoria Ltd.

Michelle Ledger

As regulators of horse-racing, it is up to us to uphold the Ethics of the sport and to define the “Minimum good” of the ethical space.



If one considers the definition of Ethics as being: a body of moral principles, or values; distinctive of; or governing a particular group. And that ethics are a combination of external governance and law acting in conjunction with an internal moral compass, or the innate sense of the “rightness” or “wrongness” of an event. The group of horseracing regulatory vets have the Rules of Racing of their respective racing authorities as well as the Veterinary Registration Authority as their ethical guide, the external laws that define their duty. We are also guided by the principles and guidelines as agreed to by the IFHA and the IGSRV.

The ethical challenges of horseracing regulation are unique by their very nature. At the very core, one could argue whether it was ethically justifiable to use horses for human entertainment and wagering. It is not a necessary activity for horses and by implication, the risks associated with horseracing are deemed by many to be unacceptable.

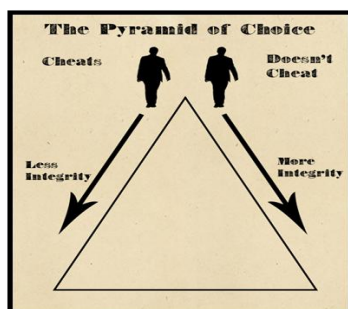
Horses also do not choose to compete and place themselves at risk, for them, it can be argued that every race is “life and death”, “flight or fright”. Would they enter the race if they understood the risks and believed that the benefits were all human?

Regardless of where you find yourself moored in this debate, the opinion by those who seek to put an end to the sport is unanimous. The perceived injustice to the horse is a unifying storm. Horseracing, as an elite sport, needs to define its lower limits of acceptability, its “Minimum good” if it is to continue to survive in a modern world that grows less and less tolerant of the perceived domination of animals by man.

It could be argued that this places the responsibility of Guardian of the Sport with the regulators. In reality, this responsibility needs to be shared by all who participate in and benefit from the sport. The Minimum good for horseracing needs to be clearly defined for all participants, easily achievable, consistent with welfare requirements and also consistent with the customer’s needs. The grey zone needs to be minimised. This is the domain of regulatory vets.

The grey zone in the ethical space diagram (figure 1) denotes those practices that are not defined by the rules and therefore are neither legal nor illegal. By their definition, these things will differ between jurisdictions. These are practices that can be rationalized by individual participants and range from practices like: withholding water from racehorses prior to racing; to hypobaric oxygen chamber therapies; and IRAP intra-articular therapy.

The grey zone areas need to be minimised because the more we are able to rationalize decisions as morally acceptable without clear definition, the greater our capacity to cheat “just a little bit” and still see ourselves in a positive light. Essentially, the concept of ‘if everyone is doing it’, then the playing fields are level. The common misconception that if one doesn’t do it then one is somehow behind in the competition. It is what Prof. Dan Ariely, author of Predictably Irrational and Professor of Behavioural Economics at Duke University, referred to as “The fudge factor”. He asserted that once you committed a dishonest act, your moral standards loosen and your ability to rationalize morality increases and your “Fudge factor” margin increases. He summarises his experiments and findings as the pyramid of choice:



Prof. Ariely went further to say that a single act of dishonesty can change a person’s behaviour

from that point onwards. Leading one to arrive at a point on the triangle that can be far from one's original intentions and principles the further one travels.

By lifting the standards of the minimum good and bridging the gap between grey zone and acceptable, regulatory vets help keep the industry accountable.

We use the rules and our testing protocols to help prevent the use of prohibited substances.

We define and help maintain the highest standards of equine welfare. We prevent horses being pushed beyond what is reasonable in the pursuit of economic gain. We support research into injuries and their prevention and need to constantly adjust for advancements in scientific methods and the demands of the general public.

In order to maintain the highest standards and achieve the expectations of racing's customers and fans, we need to collaborate. We need to be transparent, fair, accountable and most importantly consistent in our decision making.

If we put the interests of the horse 1st when considering our decisions, then the rest will follow.

We need to allow our rules of racing and our professional bodies to be our ethical guides; and also help guide treating veterinarians in making 'best practice' decisions.

The future of the sport rests in the decisions us as regulators of the sport make today. The status and importance we demonstrate for our key participants, the horses, will determine where the industry will land when the moral debate has run its course.

Europe

Gilles Thiébaud Swiss Federation of Horseracing,

A current focus in Europe particularly for standardbreds is the potential for the introduction of rules to determine an inter-race interval that maximises horse welfare. Gilles comments that it is difficult to find objective and scientifically proven evidence in the literature to determine what the interval should be, particularly given variation in the breed and ages of horses in the disciplines in which they are competing. It appears that a three-day period is necessary for courses to replenish their energy reserves after a race. Gilles would be interested to know the opinions of ICRAV delegates.

IGSRV SURVEY

SA – Strongly Agree D – Disagree N – Not Sure A – Agree SD – Strongly Disagree

Racehorses should be provided with all the benefits of modern medicine during training under the supervision of a veterinary practitioner.	SA	50%
	A	39.5%
	N	10.5%
	D	0%
	SD	0%
Medication is rarely abused by veterinary practitioners and / or trainers to facilitate the training of a horse in a manner that may compromise its health and safety.	SA	2.5%
	A	18.5%
	N	13.1%
	D	55.3%
	SD	10.6%
Racehorses are primarily economic production units, equivalent to other livestock, and it is reasonable to use medication to optimise the financial returns to owners and trainers.	SA	2.6%
	A	13.2%
	N	7.9%
	D	31.6%
	SD	44.7%
People who understand the racing industry are generally of the opinion that medication is used appropriately in the training of racehorses and that abuse of medication is quite rare.	SA	2.6%
	A	23.7%
	N	10.5%
	D	52.6%
	SD	10.5%
The perceived abuse of medication in training is a significant concern to the general public and reflects badly on the racing industry.	SA	65.8%
	A	21.1%
	N	7.9%
	D	5.5%
	SD	0%
Racehorses are owed the same duty of care by trainers and veterinary practitioners that young human athletes are owed by their coaches and sports-medicine practitioners.	SA	57.9%
	A	6.3%
	N	7.9%
	D	2.6%
	SD	5.3%
Race day medication is an acceptable and humane means of managing the demands of the racing industry and the inevitable problems caused by occupational diseases of equine athletes such as EIPH and osteoarthritis.	SA	7.9%
	A	5.3%
	N	5.3%
	D	13.2%
	SD	68.4%

Regulators seeking to limit the use of medication in racehorses in training may cause unintended consequences and reduce the financial viability of racing and contribute to the decline of the industry.	SA	13.2%
	A	15.8%
	N	7.9%
	D	36.8%
	SD	26.3%
Regulators seeking to limit the use of medication in racehorses in training may cause unintended consequences and actually compromise the welfare and safety of racehorses.	SA	10.5%
	A	15.8%
	N	5.3%
	D	31.6%
	SD	36.8%
Racehorses race more safely when chronic painful conditions are appropriately treated so that the horse's galloping action is balanced and excessive stresses are not placed on other limbs in an effort to compensate for a painful condition.	SA	13.2%
	A	10.5%
	N	15.8%
	D	30.0%
	SD	31.6%
It is not humane to permit horses, which are effectively professional athletes, to train and compete without pain relief.	SA	2.6%
	A	13.2%
	N	10.5%
	D	36.8%
	SD	36.8%
Any restriction on a practitioner's freedom to administer intra-articular corticosteroids according to his or her clinical judgement by extended stand-down periods and / or detection times is not in the best interests of horses, owners and the racing industry.	SA	7.9%
	A	2.6%
	N	0%
	D	39.5%
	SD	50%
Pre-race medication with vitamins, minerals, amino acids, electrolytes and other ergonomic aids is desirable and necessary for maintaining horse welfare.	SA	5.3%
	A	7.9%
	N	21.1%
	D	39.5%
	SD	26.3%
The administration of herbal, homeopathic and 'natural' therapies should be permitted at anytime so long as the active ingredients are not detectable by current analytical methods.	SA	7.9%
	A	7.9%
	N	7.9%
	D	39.5%
	SD	36.8%
Racehorses often become dehydrated close to the time of racing and benefit from intravenous fluid administration on the day prior to racing.	SA	0%
	A	7.9%
	N	5.2%
	D	50%
	SD	36.9%
The chronic use of clenbuterol in training does not enhance racing performance by acting as a partitioning agent.	SA	2.6%
	A	2.6%
	N	21.1%
	D	42.1%
	SD	31.6%

Post-race recovery treatment is an important part of equine sports-medicine.	SA	29%
	A	50%
	N	7.9%
	D	7.9%
	SD	5.2%
It is pointless and counterproductive to racing integrity to attempt to control substances and procedures that cannot be detected by analytical methods.	SA	5.3%
	A	2.6%
	N	0%
	D	26.3%
	SD	65.8%
The Australasian policy of exempting certain medications, for example anti-ulcer medications, chondro-protective agents, mucolytics and altrenogest, from prohibited status is misguided.	SA	7.9%
	A	23.7%
	N	13.2%
	D	34.2%
	SD	21.1%
The use of furosemide to ameliorate EIPH in training is good medical practice.	SA	2.6%
	A	34.2%
	N	26.3%
	D	13.2%
	SD	23.7%
The use of furosemide in racing may be good for the individual horse but bad for the racing industry overall.	SA	23.7%
	A	34.2%
	N	10.5%
	D	7.9%
	SD	23.7%
It is detrimental to the welfare of racehorses that furosemide is not permitted on race day in many racing jurisdictions.	SA	10.5%
	A	10.5%
	N	2.3%
	D	15.8%
	SD	57.9%
Anabolic steroids are legitimate hormone replacement therapy in geldings.	SA	0%
	A	10.5%
	N	7.9%
	D	36.8%
	SD	44.7%
Anabolic steroids aid recovery from injury and a therapeutic use exemption should be provided for injured and sick horses.	SA	5.2%
	A	36.8%
	N	15.8%
	D	13.2%
	SD	29.0%
Anabolic steroids enhance the financial viability of racehorse ownership.	SA	5.2%
	A	7.9%
	N	10.5%
	D	30.0%
	SD	47.4%

Racetrack veterinarians are often a part of the problem rather than part of the solution to integrity and welfare issue in horseracing.	SA	13.2%
	A	47.4%
	N	15.8%
	D	21.1%
	SD	2.6%
Licensing of racetrack veterinary practitioners by the racing authority is desirable and necessary to maintain and improve the integrity of racing.	SA	31.6%
	A	34.2%
	N	13.2%
	D	7.9%
	SD	13.2%
There is legitimate need for the use of medications that are not registered in horses and such off-label use is justified when the prescribing veterinarian feels no other alternative medication exists.	SA	18.4%
	A	63.2%
	N	5.3%
	D	7.9%
	SD	5.3%
Compounded medications have a necessary role in racehorse veterinary medicine and are used judiciously by racetrack practitioners.	SA	7.9%
	A	23.7%
	N	30%
	D	31.6%
	SD	7.9%
There is a risk in permitting use of compounded medications in racehorses due to possible contaminations and variations in formulations and quality control between compounding pharmacies.	SA	50%
	A	44.7%
	N	2.6%
	D	0%
	SD	2.6%
All healthy racehorses should be re-trained and transitioned into future careers as pleasure or equestrian horses	SA	15.8%
	A	47.4%
	N	10.5%
	D	21.1%
	SD	5.3%
There are sufficient good homes available for ex-racehorses.	SA	2.6%
	A	13.2%
	N	30%
	D	39.5%
	SD	15.8%
Racehorse owners take an appropriate level of responsibility for the re-homing of ex-racehorses.	SA	5.3%
	A	15.8%
	N	21.1%
	D	42.1%
	SD	15.8%
Racehorses are considered to be disposable economic units by most people in the racing industry.	SA	0%
	A	52.6%
	N	18.4%
	D	30%
	SD	0%

Humane killing must be part of any racehorse retirement program.	SA	34.2%
	A	42.1%
	N	15.8%
	D	2.6%
	SD	5.3%
Racehorse owners should pay a levy when registering a racehorse to provide for its care after retirement.	SA	15.8%
	A	60.5%
	N	15.8%
	D	5.3%
	SD	2.6%
Racing authorities have a moral obligation to provide for the care of all ex-racehorses.	SA	7.9%
	A	18.4%
	N	34.2%
	D	34.2%
	SD	5.3%
It is acceptable to humanely kill unwanted racehorses because even retired racehorses require a high standard of husbandry which is expensive and cannot assured by all persons who may wish to adopt a retired horse. Neglect is a fate worse than a humane death for an ex-racehorse.	SA	31.6%
	A	42.1%
	N	13.2%
	D	13.2%
	SD	0%
Pre-race veterinary inspections (PRVI) by regulatory veterinarians are an important tool to reduce injury rates in racehorses.	SA	55.3%
	A	23.7%
	N	13.2%
	D	7.9%
	SD	0%
The trainer should be fully responsible for presenting horses under his / her charge in a suitable condition to race.	SA	89.5%
	A	10.5%
	N	0%
	D	0%
	SD	0%
Catastrophic musculoskeletal injuries usually occur without any warning signs that could be detected in a PRVI.	SA	21.1%
	A	36.8%
	N	13.2%
	D	26.3%
	SD	2.6%
PRVI significantly improve trainer self regulation	SA	23.7%
	A	52.6%
	N	13.2%
	D	10.5%
	SD	0%
PRVI may contribute to more consistent racing performances and a better quality wagering product.	SA	29%
	A	50%
	N	18.4%
	D	2.6%
	SD	0%

Training and racing horses as two year olds is actually beneficial for the adaption of the musculoskeletal system to the demands of racing if is performed with a suitable level of care and respect for the horse's physiological adaption to training.	SA	60.5%
	A	31.6%
	N	5.3%
	D	2.6%
	SD	0%
Given horses are not fully mature until at least five years old it is unreasonable to expect them to perform at an elite level of athletic competition until that age.	SA	2.6%
	A	2.6%
	N	10.5%
	D	47.4%
	SD	36.8%
Two year old racing without the use of whips is a reasonable compromise between the welfare of the horse, the need to provide appropriate adaption of the musculoskeletal system and the financial demands of the racing industry.	SA	2.6%
	A	18.4%
	N	36.8%
	D	36.8%
	SD	5.3%
Training and racing as a two year old is psychologically damaging to the horse.	SA	2.6%
	A	2.6%
	N	13.2%
	D	52.6%
	SD	29.0%
Shin-soreness is an inevitable consequence of training two year olds.	SA	0%
	A	15.8%
	N	21.1%
	D	60.5%
	SD	2.6%
Structuring of the racing program is an effective means of limiting the physical demands placed on young horses and in assisting in the appropriate adaption of their musculoskeletal system.	SA	34.2%
	A	50%
	N	13.2%
	D	2.6%
	SD	0%
The current regulatory controls of the use of the whip are adequate to protect the welfare of the racehorse.	SA	2.7%
	A	40.5%
	N	24.3%
	D	27.0%
	SD	5.4%
The use of the whip on racehorses does not cause significant pain and distress to the horse.	SA	2.7%
	A	46%
	N	16.3%
	D	29.7%
	SD	5.4%
The use of the whip is a significant public perception problem for the racing industry.	SA	40.5%
	A	48.7%
	N	8.1%
	D	2.7%
	SD	0%

The racing industry's core customers are not concerned about the current use of the whip in racing.	SA	2.7%
	A	70.3%
	N	13.5%
	D	10.8%
	SD	2.7%
Given the current trends in attitudes to the use of animals in the entertainment industry, it is inevitable that further restrictions on the use of the whip will be necessary over the next decade.	SA	29.7%
	A	40.5%
	N	24.3%
	D	5.4%
	SD	0%
The current horseracing wagering clientele will accept stricter controls on the use of the whip and will not significantly change their wagering practice if stricter controls are enforced.	SA	8.1%
	A	54.1%
	N	32.4%
	D	5.4%
	SD	0%
The use of the whip in racing is a major 'turn off' factor for young people who are potential customers of the industry.	SA	18.9%
	A	40.5%
	N	24.3%
	D	16.2%
	SD	0%
The use of the whip contributes to an increased injury rate in racehorses.	SA	0%
	A	10.8%
	N	29.7%
	D	46%
	SD	13.5%
It is acceptable for jockeys to use appropriately designed spurs in racing.	SA	2.7%
	A	8.1%
	N	10.8%
	D	43.2%
	SD	35.1%
The use of electrical devices ('jacks') in racehorse training is a real and significant welfare problem in horseracing.	SA	21.6%
	A	48.7%
	N	18.9%
	D	10.8%
	SD	0
Regulatory veterinarians do not have sufficient influence in racing policy development and administration.	SA	24.3%
	A	29.7%
	N	10.8%
	D	29.7%
	SD	5.4%

Regulatory veterinarians may be well meaning but often get it wrong, both in policy development and in race day decision-making, because they do not understand the racing industry.	SA	5.4%
	A	8.1%
	N	13.5%
	D	43.2%
	SD	29.7%
Regulatory veterinarians are well trained for their specific role in racing.	SA	8.1%
	A	37.8%
	N	24.3%
	D	27.0%
	SD	2.7%
Regulatory veterinarians are officious bureaucrats who have often failed in veterinary practice.	SA	0%
	A	2.7%
	N	10.8%
	D	32.4%
	SD	54.1%
Special training in race track regulatory practice is desirable.	SA	43.2%
	A	51.4%
	N	5.4%
	D	0
	SD	0
Tongue ties are an acceptable means of managing dorsal displacement of the soft palate and do not compromise the welfare of the horse.	SA	13.5%
	A	40.5%
	N	24.3%
	D	21.6%
	SD	0%
The decision as to whether it is ethically justifiable to start a horse in race with a significant throat abnormality, for example complete paralysis of an arytenoid cartilage, should be that of the trainer and the veterinary practitioner.	SA	13.5%
	A	37.8%
	N	13.5%
	D	24.3%
	SD	10.8%
Nasal strips are a useful means of ameliorating the EIPH syndrome.	SA	0%
	A	8.1%
	N	32.4%
	D	37.8%
	SD	21.6%
Withholding water during the pre-race period is a useful means of ameliorating EIPHS	SA	5.4%
	A	21.6%
	N	29.7%
	D	21.6%
	SD	21.6%
EIPHS is a common cause of sudden death in racehorses.	SA	8.1%
	A	8.1%
	N	21.6%
	D	43.2%
	SD	18.9%

There is a significant probability that the EIPH syndrome is heritable to some extent.	SA	16.2%
	A	37.8%
	N	43.2%
	D	2.7%
	SD	0%
It is appropriate for regulatory authorities to ban horses from racing when a significant throat abnormality is present and the affected horses performs poorly on two consecutive occasions.	SA	10.8%
	A	51.4%
	N	21.6%
	D	16.2%
	SD	0%

ICRAV Joint and Veterinary Session Program

		Sunday 21 September 2014	
11.00	13.00	Coaches to Champ de Mars Racecourse via QuantiLAB	La Pirogue lobby SummerTimes
11.30	12.00	Laboratory Tour - Phoenix	QuantiLAB Staff
13.00	18.00	Race-day at the Mauritius Turf Club - Champs de Mars	Benoit Halbwachs
		Monday 22 September 2014	
8.30	12.00	REGISTRATION	La Pirogue Second Floor
8.30	18.00	Meetings/Opening/Joint Session 1	
8.30	9.45	IGSRV Opening Business Meeting	Brian Stewart
9.45	10.15	Coffee Break	
10.15	11.15	ICRAV Opening Business Meeting	Ed Houghton
11.15	11.30	President Protocol	
11.30	11.45	Opening - President of The Republic of Mauritius	
11.45	12.30	ICRAV Lecture: Plants That Have Altered the Course of History	Ameenah Gurib-Fakim
12.30	13.15	Lunch	
13.15	18.00	Joint Session 1: International Harmonisation	Ed Houghton
13.15	14.00	IFHA Anti-Doping and Horse Welfare Policies	M. Louis Romanet
14.00	14.40	Experiences in attempting to change the culture of racehorse medication	Brian Stewart
14.40	15.20	Pros and cons of restricting intra-articular edication	Chris Whitton
15.20	15.40	Coffee Break	
15.40	16.10	Out of competition - sampling & testing strategies	Terry Wan
16.10	16.30	Anabolic steroid harmonisation	Yves Bonnaire
16.30	16.50	British Racing's anabolic steroids policy	Jane Hall
16.50	17.10	Harmonisation - a European perspective	Tom Barragry
17.10	17.30	Out of competition testing in British horseracing: Ten years on	Lynn Hillyer
17.30	17.55	Round Table: Is Harmonisation Possible?	Ed Houghton
17.55	18.00	Chairperson's Conclusions	Ed Houghton
19.00	23.00	Cocktail Welcome	La Pirogue Gardens
		Tuesday 23 September 2014	
8.30	17.00	Joint Sessions 2 & 3	
8.30	13.00	Joint 2: Proteomics, Gene Doping and Gene Therapy	Phil Teale
8.30	9.15	Overview of 'omics strategies to control drug misuse'	Ludovic Bailly- Chouriberry
9.15	9.45	R & D on 'omics technologies - USA	Mary Robinson
9.45	10.15	R & D on 'omics technologies - Asia	Rohan Steel
10.15	10.35	Coffee break	
10.35	11.05	Genetic integrity of Thoroughbreds	Yves Bonnaire
11.05	11.50	Current and potential gene therapies and gene doping	Rick Arthur
11.50	12.20	Genetic and cellular aspects of doping - a new challenge	Patrick Diel
12.20	12.40	Pharmacokinetics of triancinolone acetonide and its effects on differential gene expression after i.a. administration to horses	Rick Arthur
12.40	12.55	Round Table Discussion	Phil Teale
12.55	13.00	Chairperson's Conclusions	Phil Teale
13.00	13.40	Lunch	
13.40	17.05	Joint 3: General Interest	Craig Suann

13.40	14.00	Hair as a sample matrix for drug screening and confirmatory analysis	Clive Pearce
14.00	14.20	Study of cobalt in racing Standardbreds	Martin Waincott
14.20	14.40	An international collaboration on cobalt for setting up a threshold value	Marie-Agnes Popot
14.40	15.00	ETRA update: Excretion rates of single and repeat doses of procaine penicillin	Glenys Noble
15.00	15.20	Coffee break	
15.20	15.40	Establishment of a urinary threshold for the control of aicar in horses	W Him Kwok
15.40	16.00	Risk assessment as a tool to increase effectiveness in anti-doping work	Göran Åkerström
16.00	16.20	Does horeseracing need a secure internet platform for intelligence and research sharing for regulators and strategic partners?	Adam Chambers
16.20	16.40	Changes and challenges in Argentinian and Latin American racing	Teresita Zambruno Young Scientist Award Winner
16.40	17.00	Novel approach to interpreting TCO2 results	Stephanie Preston
17.00	17.05	Chairperson's Conclusions	Craig Suann
17.10	17.40	Book Launch <i>Brain-Fuel Depletion: Making sense of anxiety and depression</i>	Author: Peter Symons
17.45	20.30	Meeting: IFHA Advisory Council and IFHA Welfare Committee	
		At leisure The ICRAV Band	

Wednesday 24 September 2014

8:30	11.45	Veterinary Session 1	
8:30	11.45	Veterinary 1: Round-Table - Managing the Severely Injured Horse	Peter Symons
8.30	8.40	Introduction	Chris Riggs
8.40	10.00	Diagnosis, tranquillisation/pain control/anaesthesia, stabilization, transport	
10.00	10.20	Coffee break	Second floor
10.20		Decision-making - treatment/referral/euthanasia, welfare, traps/mistakes/lessons	
		Public perception	
	11.40	Ensuring best practice worldwide	
11.40	11.45	Chairperson's Conclusions	Peter Symons
12.00	12.15	Departure Catamaran cruise (Sugar Beach lobby) with beach wear and sun protection	SB lobby
18.00		At leisure	

Thursday 25 September 2014

8.30	17.30	Veterinary Sessions 2 & 3/Posters/Workshop	
8.30	11.55	Veterinary 2: Standardbreds/Education	Peter Kallings
8.30	8.50	The mouth-strap/tongue-tie and other aids: Effect on the mouth health of Standardbreds	Göran Åkerström
8.50	9.10	Development of a retention barn facility	Martin Waincott
9.10	9.30	The Trotter Health program: Its impact on welfare, security, credibility and marketing strategies	Göran Åkerström
9.30	10.00	Forum - Behind the Start: Deciding whether to withdraw a Standardbred	Martin Waincott

10.00	10.20	Coffee break	Second floor
10.20	10.40	Training veterinary regulators	Brian Stewart
10.40	11.05	Improving regulatory veterinary procedures in a Middle Eastern jurisdiction	Thiago Luz Young Scientist Award applicant
11.05	11.25	Modernising equine anti-doping and medication control	Lynn Hillyer
11.25	11.50	Intra-articular corticosteroid injections and its association with carpal fractures in Japanese horses	Fumiaki Mizobe Young Scientist Award applicant
11.50	11.55	Chairperson's Conclusions	Peter Kallings
11.55	13.00	Poster Session	
13.00	13.30	Lunch	Second floor
13.30	15.10	Veterinary 3: Zoonoses/Other	Christian Bourdet
13.30	13.50	Hendra virus in Australia: 20 years since discovering a novel zoonosis	Martin Lenz
13.50	14.10	Cardiology for Dummies: Using the Alivecor™ heart monitor post-race; and interpreting the results	Judith Medd
14.10	14.30	Effects of bovine colostrum on performance and recovery	Thomas Tobin
14.30	14.50	Bar shoes and ambient temperature: Risk factors for EIPH	Judith Medd
14.50	15.10	Increased incidence of sudden death associated with EIPH in Venezuelan horses racing at altitude	Thomas Tobin
15.10	15.15	Chairperson's Conclusions	Christian Bourdet
15.15	15.30	Coffee break	Second floor
15.30	17.30	Vet Workshop: How to Rescue Hoss <i>Emergency horse rescue techniques</i>	Martin Lenz/Judith Medd
19.00	23.00	AORC/IGSRV Dinners	LP/SB Hotels
Friday 26 September 2014			
8.30	17.05	Veterinary Sessions 4 & 5	
8.30	12.45	Veterinary 4: Preventing Injury	John McCaffrey
8.30	8.50	Identifying horses for intervention	Ted Hill
8.50	9.20	Risk factors, and prediction of fatal injuries in Thoroughbred flat racing in North America	Stamatis Georgopoulos Young Scientist Award applicant
9.20	9.40	Shipping-in': A risk factor associated with FMSI	Thomas Tobin
9.40	10.00	Risk factors for injury in jump racing in Great Britain: Converting science into intervention	Tim Parkin
10.00	10.40	Behind the Start: Deciding whether to withdraw a runner	Peter Curl
10.40	11.00	Coffee break	Second floor
11.00	11.20	Necropsies following catastrophic injury: What have we learned from medical records and trainer reviews	Jerry Pack
11.20	11.40	Catastrophic bone injuries	Chris Riggs
11.40	12.00	Palmar osteochondral disease	Chris Riggs
12.00	12.20	Subchondral bone remodelling is more active in resting rather than training Thoroughbreds	Chris Whitton
12.20	12.40	Working with bone to minimise injury	Chris Whitton
12.40	12.45	Chairperson's Conclusions	John McCaffrey
12.45	13.30	Lunch	Second floor
13.30	17.05	Veterinary 5: Welfare/Drugs	Peter Curl
13.30	13.50	Report from IFHA Welfare Committee	Tim Morris
13.50	14.10	What is racehorse welfare? How is it measured?	Grace Forbes

14.10	14.30	Determining forces generated by padded whips: Impacts on the horse	Glenys Noble
14.30	14.50	Evaluating plasma osmolality to detect dehydration in horses	Koos van den Berg
14.50	15.10	Update: 'Post-race Distress Syndrome' in South African racing	Dale Wheeler
15.10	15.30	Coffee break	Second floor
15.30	15.50	Exertional Heat Illness in Thoroughbreds in Eastern Australia: Observations and treatment in the field	Craig Suann
15.50	16.10	Pharmacokinetics of procaterol in Thoroughbreds	Kanichi Kusano
16.10	16.30	Administration studies of procaine penicillin to determine a detection time	Lynn Hillyer
16.30	17.10	Welfare Forum - Managing the media	Patricia Ellis
17.10	17.15	Chairperson's Conclusions	Peter Curl
19.00	23.00	Gala Banquet	Sugar Beach
Saturday 27 September 2014			
8:30	12.45	Meetings	
8.30	10.00	AORC Closing Business Meeting	Phil Teale
8.30	10.00	IGSRV Closing Business Meeting	Brian Stewart
10.00		Coffee break	Second Floor
10.15	11.15	ICRAV Closing Business Meeting	Ed Houghton
11.15	11.45	ICRAV Standing & Management Committee Meeting	Ed Houghton
11.45	12.45	AORC Executive Board Meeting	Dennis W. Hill