

TEXT OF OPEN LETTER RE COBALT

Reproduced below is the text of a letter sent on Friday, 23 August 2019 to:

- Mr Barry O'Farrell, CEO, Racing Australia
- Mr Andrew Kelly, CEO, Harness Racing Australia
- CEO, Greyhounds Australia

and copied to each State Racing Minister

CALL FOR REVIEW OF COBALT TESTING AND PENALTIES IN THE AUSTRALIAN RACING INDUSTRY

We are a group of professionals with extensive experience in the field of veterinary medicine, laboratory science and public health studies. In recent years we have observed the introduction of rules pertaining to the use of cobalt in racing, gallops, harness and greyhounds. We have kept ourselves informed on hearings and judgements, and we have kept abreast of relevant scientific literature; some of us have assisted trainers in defending charges emanating from alleged use of cobalt in their animals. There has been frequent discussion within the group and we have now reached the point where we are united in the opinion that, from a scientific perspective, the present approach to detecting improper use of cobalt in racing is seriously flawed and must be revisited as a matter of urgency. We feel we are obliged to make this submission to those who control racing in Australia. We have set out the reasons for our concerns below, but before going further we want to leave no doubt that we endorse the efforts of regulators to identify and punish those who seek to gain an advantage by unfair means – which includes use of performance-enhancing substances. We also understand why the industries responded to allegations of widespread use of cobalt.

A Current Perspective of Cobalt Regulation in Australian Racing

In 2013 Australian racing regulators publicly expressed their concern that cobalt was being used in racing animals to gain an unfair advantage. Put simply, there was a view that salts of cobalt (particularly cobalt chloride) stimulate red cell production which in turn increases the supply of oxygen to muscles, thereby leading to improved performance – although many professionals would question this assertion. There were also, rightly, concerns that cobalt toxicity had implications for animal welfare.

Authorities began investigating the improper use of cobalt using advanced laboratory instrumentation, inductively coupled plasma mass spectrometry (ICPMS), to determine the concentration of cobalt in urine. It was reported that numerous “cobalt positives” were detected, first in harness racing and later in gallops. Further studies provided additional data which were used to determine a “threshold concentration” above which stewards made the interpretation that the animal had been “doped”. Routine testing was introduced in various jurisdictions, commencing with Harness Racing New South Wales in 2014. Since then more than 300 instances of alleged cobalt misuse have been prosecuted by Australian racing authorities, across three codes. In the large majority of cases, prize money was forfeited, and the trainers involved were disqualified, despite almost universal expressions of innocence. Never in the history of racing regulation in Australia has there been such an abundance of “doping” cases. While Racing’s reputation has almost certainly been damaged as a result, there is also no doubt that many observers hold the view that innocent parties have been wrongly penalised.

Scientists seeking an explanation for the explosion in cases acknowledge that ICPMS is a highly **sensitive** assay, detecting minute quantities of cobalt. But importantly it lacks **specificity** because it identifies **atoms** of cobalt, rather than those **compounds** (e.g. cobalt chloride) which are the targets of the regulators.

There is universal agreement that the essential vitamin (B12) has a cobalt atom within its structure and will therefore contribute to a “cobalt positive” result when measured using ICPMS. Vitamin B12 meets none of the criteria for prohibited substances under the rules of racing (or any other professional sport). In this context, tribunals such as QCAT have directed authorities to submit “cobalt positive” samples for supplemental testing designed to discriminate between cobalt atoms coming from, say, cobalt chloride, and those coming from Vitamin B12. On the basis of results that have been made known to us, we conclude that much of the “cobalt” in some test samples has in fact come from Vitamin B12, thereby supporting the trainers’ assertions that the horses had not been “doped”. While the origin of the B12 in the urine is yet to be elucidated, a possible factor is the use by trainers of various B12-containing approved supplements administered as directed by manufacturers.

It is also clear that at least some of the cobalt “infringements” have been caused by feed and environmental exposure to cobalt, outside the knowledge or control of the trainer. It is stressed that cobalt is an element ubiquitous in nature, and in trace quantities essential to life. It should be stressed that levels being considered in current cases are very small, and in all probability inconsequential.

The key reasons for our concerns are as follows:

1. THE TEST METHOD

As presently applied, ICPMS (the cornerstone test for cobalt) cannot differentiate cobalt atoms coming from target compounds such as cobalt chloride and those from Vitamin B12. There can be no questioning the fact that B12 is produced naturally in the horse and has no biological properties in common with those of cobalt chloride. Quite rightly, regulators’ initial concerns for misuse of cobalt in racing did not extend to Vitamin B12.

2. THE TEST SAMPLE

Reliance on results from a single urine sample is prone to error. Tests on other body fluids such as plasma are likely to be more informative. Single, qualitative cobalt tests on urine are not utilised in human pathology – in the main because the test subjects’ level of hydration at the time urine is sampled can have a great influence on the concentration of target analytes. (We understand the operational simplicity of urine sample.)

3. USE OF A THRESHOLD VALUE

We do not support the practice of setting “threshold” regulatory levels for urine cobalt based on population studies on individuals whose history of legal exposure to veterinary products containing cobalt and Vitamin B12 is unknown and/or ignored. The official studies to construct the threshold have never been peer reviewed or published. The populations used were small and insufficiently pedigreed, and the ICPMS values used were not corrected for dehydration or presence of Vitamin B12. The cobalt threshold so applied is tenuous and does not specifically define the Prohibited Substance of HIFS Cobalt described under Schedule 1 of the ARB Rules.

4. CONFUSION IN THE RACING INDUSTRY REGARDING IMPACT AND TOXICITY OF COBALT SALTS

While we should not need to state that we do not condone any unscrupulous behaviour or animal abuse, it is our firm view that both the potency and potential toxicity of cobalt salts in the current context have been exaggerated.

We are unanimous in the belief that the current approach to detecting cobalt abuse in Australian racing animals is misdirected and has the potential to lead to unjust convictions and unfair penalties for participants. We are also concerned that significant reputational damage to industry is a possible consequence. Accordingly, we are urging industry regulators to take the following steps at first opportunity:

1. Implement a moratorium on any action regarding cobalt irregularities pending clarification of the matters set out above
2. Provide administrative and financial support for a Committee of Inquiry comprising representatives from racing's regulatory bodies and industry stakeholders, as well as veterinarians, scientists with appropriate qualifications and experience, and statisticians (the latter groups to be independent of racing bodies)

The charge to the Committee should be to find a consensus approach to the future regulation of cobalt in racing animals. Apart from meeting the expectations of regulatory bodies and industry groups, such a consensus must be so robust as to achieve unequivocal endorsement by the wider veterinary and scientific communities.

One of the Terms of Reference should be to determine the role of Vitamin B12 in the testing for improper use of cobalt and in the interpretation of test results. While we have read the extensive body of peer-reviewed evidence on the topic, we see the need for additional research on the potential for popular supplements to create "false-positives" in tests for cobalt.

Please contact us for any further explanation, information and assistance in this matter. Please bring this letter to the attention of your Board.

Yours sincerely,

Dr Andrew Clarke

- Principal Consultant, Equine Connections,
- Former Professor of Equine Studies and Head of the Equine Centre School of Veterinary Science, University of Melbourne
- Former President and CEO Equine Research Centre Inc Guelph Ontario Canada
- Former Head of The Equine Research Centre and Professor Department Biomedical Sciences University of Guelph, Ontario Canada
- Former Research Fellow School of Veterinary Science University of Bristol England

Mr David Dawson

- Director, Brisbane Racing Club
- Formerly Chief Scientist Qld Department of Health Pathology Services
- Former Consultant to World Health Organization
- Author/co-author of more than 50 peer-reviewed scientific publications.

Dr Derek Major

- Equine Veterinary Consultant
- Co-author of peer-reviewed, published scientific papers on cobalt administration studies in horses

Mr Neale Scott

- Former Harness Racing Trainer and Driver
- Co-Investigator into the epidemiology of cobalt positives in Australian racing codes

Mr Ross Tinniswood

- Retired Medical Scientist and former Queensland Health Dept Executive.
- Extensive administrative experience in diagnostic laboratory testing, equipment and technologies., and test result interpretation.
- A former NATA Laboratory Assessor and former Director of the Brisbane Turf Club.

Mr Ross Wenzel

GradDip(ClinBiochem), MAppSc(Thesis)

- Senior Medical Scientist with over 20 years' experience determining trace element concentrations in clinical samples.
- Co-author of peer-reviewed, published scientific papers on cobalt administration studies in horses. Researcher at UTS Centre for Forensic Science.

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- Minister for Racing and Minister for Multicultural Affairs QLD
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