

## CONTENTS

Rodmor Trust Lecture Series 2017	1
NZERF Activities	1
Research update: Leptospirosis in horses	2
Research update: Laryngeal Ultrasound in Yearling Thoroughbreds	2
Dr Jonathan Hope Equine Veterinarian Scholarship	2
Obituaries	3
Young Achiever Award 2017	3
Valachi Downs Young Achiever Award	3
Future-Focused Farriery	4
NZERF Vet-Farrier Scholarship 2017	4
New Research Project	5
Completed Research Project	5
Travel Grant - Sophie Wigley	6
NZ Equine Health Association News	6
Travel Report - Kevin Wastney	7
2017 Massey Scholarships	7
Chairman's Corner	8
NZERF Contact Information	8
Acknowledgements	8

THIS BULLETIN IS PROUDLY SPONSORED  
 BY THE RODMOR TRUST

## R Rodmor Trust Lecture Series 2017: "The Elite Equine Athlete: Selecting, training and maintaining horses for optimum performance".

Well known equestrian Jock Paget brings his vast experience as an international event rider to our lecture series. After significant success in New Zealand, including twice being named "Eventer of the Year", Jock moved to the UK and over a number of years achieved remarkable success, predominantly riding the "Clifton" horses. He competed as an individual at the World Equestrian Games in Kentucky in 2010, and in 2012 was a member of the NZ Olympic Team in London, where the team won bronze, finishing the year fourth in the world FEI HSBC Rankings. In 2013, Jock won the Mitsubishi Motors Badminton Horse Trials on Clifton Promise - the first Badminton debutant to win since fellow Kiwi Mark Todd in 1980. In 2016, Jock was selected into the New Zealand Olympic Team and travelled to Rio as a strong contender, but a freak stable accident saw him have to withdraw.

Jock has now returned to NZ with his wife Tegan, taking up the new high performance development coaching role with Equestrian Sports NZ, and although he wants to become a world class coach, he still has his sights set on making the New Zealand team for the 2020 Tokyo Olympics.

Alec Jorgensen is a well-known and respected equine veterinarian based in the Waikato, where he works with all types of equine athletes – Thoroughbred, Standardbred and Sport Horse – thus bringing a breadth of knowledge to his presentation. Alec trained

and graduated in Bristol, UK, in 1998. After initially working in a first-opinion practice he then completed an equine internship at the Liphook Equine Hospital, UK, before moving to the USA and spending four years completing a residency programme at the University of Pennsylvania. There he obtained a Certificate in Equine Practice from the Royal College of Veterinary Surgeons and became a Diplomat of the American Board of Veterinary Practitioners (Equine Specialty).

Alec joined Hamilton Veterinary Services Equine Clinic in 2005. His primary interests are lameness, diagnostic imaging and sports medicine. Pre-purchase and sales work for both racehorses and sport horses is a large portion of his clinical work. He gets a great deal of satisfaction from his work with competition horses, (eventers, dressage horses and show jumpers) and in 2012 and 2013 was the team vet for the New Zealand Trans-Tasman Eventing Team.

### Dates and venues:

Sunday 30 July  
 Gallagher Academy of Performing Arts  
 University of Waikato, Hamilton

Wednesday 2 August  
 Awapuni Racecourse, Palmerston North

Sunday 6 August  
 Addington Raceway, Christchurch



Speakers: Jock Paget (left) and Alec Jorgensen (right)

## NZERF ACTIVITIES

### RECENTLY THE NZERF HAS:

- Announced the Valachi Downs Young Achiever winner
- Announced the Dr Jonathan Hope Scholarship winner
- Awarded 3 Massey Veterinary Student Scholarships
- Monitored on-going research grants
- Supported the veterinarian-farrier clinics
- Distributed the Spring Bulletin

### UP-COMING ACTIVITIES INCLUDE:

- Organise and run the 2017 Rodmor Trust Lecture Series
- Call for and review 2017 research grant applications
- Monitor on-going research grants
- Publish Autumn Bulletin
- Conduct a survey of the equine community to determine research needs
- Publish booklet on Laminitis
- Publish booklet on The Hoof



## Research update: Leptospirosis in horses

Charlotte Bolwell, Massey University

Leptospirosis is an important zoonotic disease in New Zealand that is found in domestic animals, wildlife and people, and has a significant impact on animal and human health worldwide. Our new study, conducted by teams at the Equine Research Centre and EpiLab (Massey University), is identifying whether broodmares and racehorses in New Zealand have a history of leptospirosis infection. Although we know how often it occurs in livestock, there is very little information about the occurrence of leptospirosis in horses. Older reports suggest the occurrence of leptospirosis in horses in this country is low but the bacteria (*Leptospira*) that cause the disease are not routinely tested for in horses. So now we need to know whether leptospirosis currently occurs in the equine industry and the role horses play in the spread of leptospirosis to other animals and humans.

The objectives of the project are to determine the prevalence of leptospirosis antibodies in the blood and to evaluate potential risk factors for being seropositive in horses in New Zealand. The study involves taking blood samples from broodmares and racehorses to test for past exposure to leptospirosis. We are testing for the most common strain reported in horses and humans worldwide, and hope to expand our study to include other strains common

in cattle and wildlife. Our team is visiting stud farms and racing stables to take the blood samples and will also be asking the stud manager or trainer to complete a short survey. The survey asks about horse management such as housing, contact with standing water and exposure to other farm animals, rodents and wildlife, which may increase the chance of horses being exposed to the bacteria.

This study is important as leptospirosis in broodmares is of significant concern for the breeding industry worldwide. Infection in pregnant mares can result in pregnancy loss, with abortions occurring late in gestation. There are also recent reports from Brazil of the presence of *Leptospira* in the uterus of mares with reproductive problems. In Kentucky, there is a substantial economic loss to the breeding industry due to the high number of abortions caused by leptospirosis. The disease can also cause equine recurrent uveitis (and subsequently blindness) and it poses a zoonotic risk to people working with horses.

For those that agree to include their horses in the study, we will test horses free of charge and we will provide feedback about the results of their horses. A summary of the results will be made available at the end of the study.

## Dr Jonathan Hope Equine Veterinarian Scholarship - Barbara Hunter

The NZERF is proud to award the Jonathan Hope Equine Veterinarian Scholarship for 2016 to Dr Barbara Hunter, Registered Specialist in Equine Surgery at Matamata Veterinary Services.

Barbara will put her award to good use to further her already impressive resume. Her plan is to pursue a 2 week externship with the Imaging Department at the Sydney University Teaching Hospital, in addition to a 2 week externship at Ballarat Equine Veterinary Practice. Her specific areas of training will be in advanced equine ultrasound, MRI and nuclear scintigraphy.

On top of this Barbara will be studying for the membership exam in the Australia New Zealand College of Veterinary Scientists, Large Animal Radiology.

We wish Barbara every success in her endeavour and are proud to have such skilled and motivated veterinarians in the country - leaders of the future.

NZERF is indebted to Dr Jonathan Hope for funding this scholarship. What a great new opportunity it presents to keep NZ at the forefront of equine veterinary medicine and surgery internationally.



Dr Barbara Hunter & NZERF Board Member Dr Noel Power

## Research update: Laryngeal Ultrasound in Yearling Thoroughbreds

Dr Barbara Hunter, Matamata Veterinary Services

'Roaring' (left laryngeal hemiplegia) is one of the most common wind problems affecting racing Thoroughbreds. Diagnosis is typically made on resting endoscopy, however this can result in horses affected in the early stages of the disease being missed. The gold standard for diagnosis is dynamic endoscopy, where a horse is worked with an endoscope in place, but this is not always readily available.

In older horses, ultrasound of the laryngeal muscles has been shown to be more accurate in diagnosing 'roarers' than resting endoscopy, but its accuracy has not been evaluated in yearlings. As horses become 'roarers', the laryngeal muscles on the left side of the throat shrink down into dysfunctional scar tissue. This change is easy to spot in older horses, but the appearance of these muscles in young, developing horses is unknown.

When yearling Thoroughbreds are sold as racing prospects, resting endoscopy of the upper airway is routinely performed. Yearlings that have higher laryngeal function grades are often perceived by buyers to be at an increased risk for becoming 'roarers'; however, this is not necessarily the case. Ultrasound of the laryngeal muscles has potential to be a useful tool to augment resting endoscopy findings, however the appearance of these muscles in normal yearlings must first be evaluated.

This study will compare laryngeal ultrasound findings to resting endoscopy findings in a large population of yearling Thoroughbreds and follow changes in the muscles over time as the same yearlings are re-evaluated as two year olds. Data collected will establish baseline values for normal laryngeal muscle appearance in Thoroughbred yearlings.

## OBITUARIES

**EMERITUS PROFESSOR  
ERIC DESMOND (DES)  
FIELDEN, BAGSC, BVSC,  
FRCVS, FACVS, ONZM,  
(1929-2016)**



A valued member of the veterinary community and former NZ Equine Research Foundation Board member, Emeritus Prof Des Fielden passed away recently.

As Chairman of our Technical Sub-committee for many years Professor Fielden made a very significant contribution to equine research in New Zealand as well as to the many activities of the NZERF. With his background in academia, wide range of contacts and his enthusiasm for the work of the Foundation he contributed massively to our success. He also wrote the "History of the NZERF" which was a fantastic feat.

Excerpts from his obituary follow:

"Prof Des Fielden grew up in Auckland and attended Auckland Grammar School where he won the Rope cup for the outstanding all-round student reflecting academic, leadership and sporting excellence. He obtained a BAgSc degree at Massey College before winning a NZ Veterinary Services Council bursary to study veterinary science at the University of Sydney.

He began his veterinary studies in 1951, marrying Honor Rowley from Lake Hawea Station prior to leaving for Sydney 1951, and graduated BVSc with honours. He worked as a veterinarian in Opotoki and Ruatoria, before moving to the Ruakura Research Centre where he was involved with research in dairy cattle reproduction, and then later as the first superintendent of the NZ Dairy Board's artificial breeding centre at Awahuri. From there he was recruited as the foundation professor in clinical veterinary science at the new veterinary faculty being established at Massey University when he was only 34 years of age, and was responsible for ensuring that the first graduates were of international standard.

Prof Fielden received a number of distinctions during his career, reflecting his interest in animal reproduction, published 60 papers and was involved in the supervision of 22 postgraduate students.

In 1979 Prof Fielden was appointed Dean of the faculty, a position he held for 10 years. During this period he oversaw a considerable expansion of the faculty in terms of student and staff numbers, and research capabilities. A legacy of his 26 years of academic leadership is reflected in the high standing of the veterinary profession in New Zealand.

Des gave a lot of time to other organisations, was an active member of a number of national and international committees and an assistant editor of the NZ Veterinary Journal, with some activities continuing after his retirement. Other involvements included those in the community such as Rotary and Probus. His contributions throughout his working and community life were acknowledged with a New Zealand Commemoration medal in 1990, by becoming an Officer of the New Zealand Order of Merit in 1997, and by the Massey University medal in 2011 for service to the university.

Throughout his career Des was supported by Honor, who survives him along with their four children Virginia, Malcolm, Jan-Mary, Paula, their spouses, 10 grand-children and five great grand-children."

Bob Jolly and Neil Bruere. *Edited excerpt from VetScript 2017*

## Young Achiever Award

**Kindly Sponsored by Valachi Downs Stud**

Applications close on 31 October, 2017 for the Valachi Downs Stud Young Achiever Award. Due to the generous sponsorship of Valachi Downs Stud the annual award of \$15,000 will be available to assist an individual under the age of 35 years in their career in the equine industry. Applications will be accepted from, but not necessarily limited to, the following:

- A post-graduate, masters or honours student undertaking study or research in an area of equine science
- An individual pursuing any specialized equine study or course (including farriery)

- An individual committed to embarking on a career in the equine industry
- An individual already contributing to the equine industry who wishes to further their career

Applications are to be made on the Valachi Downs Stud Young Achiever Award application form available from the NZERF Office or from the website.

Applicants will be expected to show evidence of both their commitment to the equine industry and their other attributes that would make them appropriate recipients of this Valachi Downs Stud Young Achiever Award

**Closing date 31 October, 2017**

## Valachi Downs Young Achiever Award - Ben Bateman

The NZERF is proud to award the 2016 Valachi Downs Young Achiever Award to Ben Bateman of Palmerston North.

Ben has been working in the field of farriery for the past four years, having completed his apprenticeship with the Equine Lameness Prevention Organisation (ELPO). Currently there are only two ELPO certified farriers in New Zealand. Ben also has a Bachelor of Science degree from Massey University (double majoring in Physiology and Animal Science), in addition to 20 years of riding experience as a competitive eventer and show jumper (including two national titles).

Ben aims to use his award to gain further farriery experience in England with Total Foot Protection Ltd (a branch of ELPO), then 2 weeks in Colorado completing instructor/examiner certification.

His goals include training more farriers in ELPO methods as well as running seminars and educational events. He has a full client list at present and we anticipate he will be a name to watch out for in educational circles among farriers of the future.

NZERF are very grateful to Kevin Hickman of Valachi Downs Thoroughbred stud for his unwavering support.



Farrier Ben Bateman & NZERF Board Member Dr Noel Power

## Future-Focused Farriery

Nicola Felton

Approximately 40 vets and farriers convened at the new Waikato Equine Veterinary Centre in Cambridge to listen to ground-breaking research findings and insights from two international professional farriers, Scott Lampert and Mitch Taylor.

The Cambridge seminar concluded New Zealand's first ever Veterinarian-Farrier seminar series which toured the country in October 2016. The series was initiated by a group of passionate equine professionals who recognised the need for continuing education of both vets and farriers in New Zealand. The main objective of the series was to bring international expertise to New Zealand, and to encourage collegiate discussion between vets and farriers.

Rob Pinkney, a Waikato-based farrier who runs Kowhai Forge, was one of the major driving forces behind the series. Rob's strong passion for equine welfare and desire to create positive developments in the farrier industry started the series, which was supported by a number of other passionate industry professionals and organisations. Rob was really impressed with the support that the series received, and gives credit for its success to the other team members, colleagues and organisations involved in delivering the series nation-wide.

One such supporter was Noel Power, a Waikato Equine Veterinarian who saw a great need for the series and brought on board the New Zealand Equine Research Foundation and New Zealand Equine Vet Association. Commercial sponsor P3 Equestrian also identified with the cause and jumped at the opportunity to support the series financially.

In an industry shaped by tradition, the seminars brought a future-focused, proactive perspective to racehorse and sport-horse wellness, which was backed by the science and technology that make Mitch and Scott professionals in their fields. The seminar series was centred on fundamental biomechanics, the structure of the foot, and the changing climate of the performance horse.

Given the differing opinions held by the variety of industry professionals in attendance, each seminar had the potential for conflict, yet the environment was incredibly positive. Everyone attending, regardless of age or occupation, soaked up as much knowledge and information as they could, which cemented not only the worth of the content being presented, but also the immense need for these seminars in New Zealand. Scott Lampert captivated the audience with the use of high speed video to analyse footfall and leg structure, and his application of this to the needs of the hoof. Participants were also treated to a practical, full leg dissection which allowed them to understand the movement of, and strains on the biomechanical structures in the hoof. The Waikato Equine Veterinary Centre team then radiographed the foot to show proportion and placement of key elements such as the coffin bone.



*Mitch Taylor speaks to Waikato seminar attendees about leg and hoof structure whilst performing a practical leg dissection*

The collaborative group setting allowed for conversation and questions amongst the presenters and participants. The interactive nature of the seminars meant that regardless of whether attendees were apprentices or experienced farriers, they could ask questions and gain knowledge specific to their needs.

Both Mitch and Scott thought the seminars had been very well received, and said it was fantastic to see New Zealand offering farriers opportunities to continue developing their knowledge and skills. Organisers were also very pleased with the support that the seminars received, from the backing of a variety of farriers and organisations to the large turnout at every location and the hugely positive response from attendees. They hope that this series is just the start of a range of educational opportunities for vets and farriers, and that they've opened the door for the development of future-focused farriery.

Thank you to all our sponsors and supporters who made the series possible.



*Mitch Taylor (left) performing a practical dissection whilst Rob Pinkney (middle) and Scott Lampert (right) engage in conversation with a seminar attendee.*



### New Zealand Equine Research Foundation: Veterinarian – Farrier Scholarships

**Closing date is 30 November, 2017**

Annual scholarships for a veterinarian and a farrier to attend a suitable course or symposium and/or spend time with colleagues in the USA are provided by the Foundation.

The scholarships are intended –

- To improve the knowledge and skill of New Zealanders in care and treatment of the horses' foot, and
- To encourage veterinarians and farriers to work together as a team to overcome problems of the horses' foot.

Preferably applications should be made jointly from veterinarians and farriers from the same geographical area.

The scholarship is valued at \$3,000 per veterinarian or farrier

Applications should be made on the Vet/Farrier Travel Grant forms available from

- the NZERF Office, PO Box 52 Palmerston North or
- from the website [www.nzerf.co.nz](http://www.nzerf.co.nz)

## Completed Research Project

### Viral Factors as Novel Therapeutics for Skin Wounds in Horses; a Successful International Collaboration

**Christine Theoret (co-principal investigator); Christopher Riley (co-principal investigator) Andrew Mercer (co-investigator); Lyn Wise (co-investigator)**  
Massey University, University of Montreal and University of Otago

In 2014-15 the NZERF funded a project that combined global expertise in equine wound healing and New Zealand know-how and innovation. In brief, the project used proteins identified in the Orf virus of NZ sheep to see if they can be used to enhance the healing of open wounds in horses. This work is based on the observation that sheep and people infected with this virus typically developed large scabby lesions that healed without a scar.

The group, led by Prof Andrew Mercer and Dr Lyn Wise, discovered some of the molecules responsible for this at the University of Otago. These were then applied to equine wounds by Prof Christine Theoret during her sabbatical at Massey University with Prof Chris Riley. In January this work was profiled in "The Horse" magazine, a publication for horse owners with over 300,000 subscribers. Although the viral molecules that were used in the equine wounds did not increase the rate of healing, they were shown to alter the expression of genes that moderate inflammatory and immune responses in the wound. It was concluded that the dose of the viral molecules may need to be increased, and as a result new work has been funded to address this and other questions that arose during the study.

During the project it was found that there was a lack of information about the importance of wounds in horses in New Zealand, and Christine and Chris undertook a survey of New Zealand veterinarians. This showed that not only are wounds expensive to treat, they are also very important as euthanasia is sometimes necessary. This study was published in the New Zealand Veterinary Journal. They also initiated a similar study in Australia that was published in The Australian Equine Veterinarian, and won the award for best equine practitioner paper in Australia in 2016. A list of the presentations and publications from this extremely successful project is listed below.

#### Published papers

1. Bodaan CJ, Wise LM, Wakelin KA, Stuart GS, Real NC, Mercer AA, Riley CB, Theoret C. Short-term treatment of equine wounds with Orf virus IL-10 and VEGF-E dampens inflammation and promotes repair processes without accelerating closure. *Wound Repair and Regeneration* 2016 Online: DOI: 10.1111/wrr.12488.
2. Wakelin KA, Wise LM, Bodaan CJ, Mercer A, Riley CB, Theoret, CL. Orf virus interleukin-10 and vascular endothelial growth factor-E modulate gene expression in cultured equine dermal fibroblasts. *Vet Dermatology* 2016;27(5):434-e114 doi: 10.1111/vde.12370

3. Theoret CL, Bolwell CF, Riley CB. A cross-sectional survey on wounds in horses in New Zealand. *New Zealand Vet J* 2016;64:90-94.
4. Sole A, Bolwell CF, Dart A, Riley CB, Theoret CL. Descriptive survey of wounds in horses presented to Australian veterinarians. *Aust Equine Vet* 2015;34 (4): 68-74.

2016 Equine Veterinarian Australia (AVA) Peter Irwin Literary Prize

#### Published abstracts & conference presentations

1. Wise LM, Bodaan CJ, Wakelin KA, Stuart GS, Real NC, Mercer AA, Riley CB, Theoret CL. Orf Virus IL-10 and VEGF-E Dampen inflammation and promote repair processes in equine wounds. Proc of the Joint Meeting of the Australasian Wound & Tissue Repair Society & Molecular and Experimental Pathology Society of Australia, Melbourne, Australia 2016. Proceedings published in *Wound Repair and Regeneration*: 24(6):A9.
2. Theoret C, Wakelin K, Bodaan C, Riley C, Mercer A, Wise L. Effect of viral proteins on equine dermal fibroblasts. ACVS Symposium- Surg Forum & Sci Meet, Seattle, WA, USA 2016.
3. Theoret CL, Wakelin K, Bodaan C, Riley CB, Mercer, A, Wise L. 2016. Viral factors as novel therapeutics for skin wounds in horses. Proc 28th Annual Meeting of the Wound Healing Society, SAWC-Spring/WHS Joint Meeting. Atlanta, GA, USA, 2016:61.
4. Theoret C, Wakelin K, Bodaan C, Riley C, Mercer A, Wise L. Effect of viral proteins on equine dermal fibroblasts Effect of viral proteins on equine dermal fibroblasts. Proc ECVS 25th Annual Scientific Meeting, Lisbon, Portugal 2016:E15.

#### Media

A Virus Might Help Horse Wounds Heal  
TheHorse.com  
<http://www.thehorse.com/articles/38706/a-virus-might-help-horse-wounds-heal>



## New Research Project

### Immunomodulation with Interleukin-10 as a Potential Therapeutic Strategy for Preventing the Onset of Fibroproliferative Disorders in Horses

**Christopher Riley (co-principal investigator); Christine Theoret (co-principal investigator); Lyn Wise (co-investigator); Andrew Mercer (co-investigator);**

Massey University, University of Montreal and University of Otago

Skin wounds in horses are commonly seen by veterinarians and horse owners in New Zealand, and are a frequent reason for euthanasia. Many of these wounds can't be sutured and must heal by open wound management. A complication often encountered in healing wounds in horses, especially those on the legs, is excessive accumulation of fibrous tissue or "proud flesh". There is currently no conventional method proven to accelerate wound healing or to successfully prevent or treat proud flesh in the horse.

This project builds on previous work, generously funded by the NZERF, where we found that the viral interleukin 10 (IL-10) normalised the immune and inflammatory responses, and controlled the enzymes required for tissue remodelling in an equine model of a fibroproliferative disorder (i.e. "proud flesh"). The specific aims of this next study are to measure the ability of purified viral IL-10 from Orf viruses in New Zealand sheep, or recombinant equine IL-10 molecules to control the immune and inflammatory responses of equine cells (fibroblasts) isolated from the deeper layers of the skin, tendon and cornea of the eye. We wish to determine if either the purified viral IL-10 or recombinant equine IL-10 will enhance remodelling and stop the development of proud flesh.

Knowledge from this project will contribute to the eventual development of novel drugs able to enhance the quality of life and performance potential of horses suffering from abnormal fibroproliferative disorders, and possibly modulate the keloid scars suffered by people. The research team includes world-renowned expert in equine wound healing Prof Christine Theoret, Director of the Comparative Veterinary Tissue Healing Laboratory at the University of Montreal, Dr Lyn Wise, one of the discoverers of the wound enhancing properties of the Orf virus (a New Zealand innovation) and an expert in viral immunology, Prof Chris Riley, Registered Specialist in Equine Surgery, and their technical support team. In this project cells will be collected from horses, and tissue culture and molecular techniques will be used to discover the trigger factors for preventing or controlling proud flesh with IL-10. The project will also involve a post graduate student at the University of Otago.

## Travel Grant - Sophie Wigley

In May 2016, with the help of an NZERF travel grant, I was lucky enough to travel to Cove, Scotland to attend the General Practitioners Course in Western Veterinary Acupuncture and Chronic Pain Management run by vet Samantha Lindlay and Dr Mike Cummings. Sam has been practising acupuncture since 1991 and runs a pain clinic at Glasgow and Edinburgh Universities. She also teaches doctors at the British Medical Acupuncture Society. She has been running this veterinary course, in conjunction with Mike, since its inception in 2000. Mike is a doctor and the Director of the British Medical Acupuncture Society.

The aim of the course was to give us an understanding of how acupuncture works, and to apply scientific principles in order to confidently and safely use acupuncture. The first part of the course involved lectures, practical sessions with horses and dogs, and group seminars discussing cases and treatment approaches. The second part of the course focused on electro-acupuncture, chronic pain management, current research on the practice of acupuncture and use of acupuncture for conditions other than musculoskeletal pain.

Acupuncture is defined as 'the insertion of a solid needle into the body with the purpose of alleviating pain and modifying disease'. Acupuncture works by 'fooling' the brain into releasing potent pain-relieving chemicals. It has been widely practiced around the world for thousands of years and is mainly thought of as a traditional Chinese medicine. However, there is evidence that it was used as early as 3200 BC in Italy, 1550 BC in Egypt and 1300 BC in India. The traditional Eastern approach to acupuncture is based on energy channels and uses the pulse and tongue for diagnosis. The Western medical approach is based on neurophysiological principles and uses orthodox medical diagnosis.

Research into acupuncture has shown that it works in 4 different ways to improve function and provide pain relief.

- Local effects (in the tissue where the needle is placed):
  - Blood vessel dilation and proliferation
  - Nerve growth
- Segmental effects (in the portion of spinal cord that innervates the tissue where the needle is placed):
  - Signal competition in the spinal cord segment causing
    - ~ Pain alteration
    - ~ Nervous system alteration
- Heterosegmental effects (in the adjacent portions of spinal cord):
  - Inhibition of pain occurs at all levels of the spinal cord but is most concentrated at the segment stimulated.
- General effects
  - Endorphin and hormone release (internal pain killers)
  - Limbic system deactivation (area of the brain involved with mood)
    - ~ Causes the patient to care less about the pain

Basically acupuncture is tricking the brain into thinking that a worse, more painful condition is present so it is no longer concerned with the actual pain. Acupuncture itself is not painful but the sharp sensation associated with inserting the needles is enough of a stimulus to change the pain pathways in the body. Acupuncture can provide potent pain relief so it is very important to rule out serious causes of pain so that the underlying condition is not made worse. For example, if a horse has a tendon injury or a hair line fracture, pain is necessary to prevent the horse from using the leg. However, if the horse is painful from low-grade arthritis or muscle pain, using acupuncture to remove the pain will make the horse feel better and perform better as a result.

The course taught us to palpate skeletal muscles and interpret the patient's entire pain state. On one day we placed needles into other delegates on the course. This helped us to understand the sensation of acupuncture and it was helpful to have a patient that could verbalise how it felt. It was also interesting to experience electro-acupuncture - a pleasant buzzing rather than the electric shock I was expecting! We spent a lot of time palpating horses and dogs and learning acupuncture trigger points.

This course has changed the way I approach painful conditions in horses. There are many uses for acupuncture and I really look forward to utilising it as an adjunctive treatment. I have already used acupuncture for musculoskeletal conditions and find it helps horses recover from injuries a lot faster. I would like to say a huge thank you to the NZERF for helping me to attend this course and also to the Rangiora Vet Centre for contributing to the cost of the trip.



*Dr Sophie Wigley – acupuncture course 2016*

## NZ Equine Health Association News

The New Zealand Equine Health Association met with MPI officials in March to discuss various challenges being faced while rolling out the Government Industry Agreement. Although the equine industry signed a Deed to enter into an agreement with government some years ago, a specific agreement on readiness and response to emerging equine diseases has been slow in coming. The readiness agreement, once signed, will ensure both parties are optimally prepared to respond to an Equine influenza outbreak or other incursion. Updating and refreshing the response plan with MPI is planned for this year and a key part of this will be a more detailed strategy on how to best use vaccination to minimise epidemic length. The NZEHA has continued to work on setting up a small vaccine bank and is currently awaiting some amendments to the vaccine registration conditions to allow this. Meanwhile NZEHA has been progressing New Zealand's equine disease surveillance system capabilities. The platform that will allow primary health care data from equine veterinary visits to be systematically coded and collated on a central server is working well and further clinics have been recruited.

NZEHA has also been consulting with MPI on a number of matters of importance to our industry, including a range of risk management measures to ensure equine diseases will not enter New Zealand associated with the importation of compost made from horse manure, which is currently being proposed.

Dr Trish Pearce | Executive Advisor to NZEHA

## Travel Report - Kevin Wastney

Thanks to a scholarship from the NZERF I was once again able to attend the Equine Lameness Prevention Organisation (ELPO) conference in Las Vegas. My first stop was Arizona where I was honoured to spend a week with Gene Ovniczek, instigator of the wild horse research in 1984, as well as a lot of remedial shoeing. I was involved in continuing research on hind foot issues and did a lot of slow motion video work on capsule distortion when a hind foot is out of balance in relation to the coffin bone. Then it was off to Vegas for a very intense and informative 3-day conference with a variety of speakers, including both vets and farriers.

David Nicholls, a very experienced farrier of 48 years from the U.K., gave an informative lecture on lameness diagnosis, showing there is a logical sequence of diagnostic events that should be taken. David works with several veterinary hospitals in the U.K. and showed a very good series of pictures on the use of the Kross Check Leverage Boot. Clifford Smith, a certified shoeing instructor and examiner, covered horsemanship for the hoof care provider as a guide to keeping yourself safe. Dr Kimberly Hennemaus gave a very comprehensive lecture on soft tissue injuries. She showed how 'inert' connective tissues like fascia, tendons, ligaments, joint capsules and bones are actually very adaptive and critical to many aspects to function. She also touched on body mechanics and soft tissue injuries of sacro-iliac region. David Nicholls discussed flaring of the hoof capsule, why it occurs and how to prevent it. This was a very interesting lecture on balancing the bony column, which has been a big part of ELPO research over the years. It reinforced a lot of logical points, and demonstrated how unnecessary leverage affects the hoof capsule. Daisy Beckings then gave a short but interesting talk on maggot debridement therapy. She used a series of pictures and videos to show the results on a horse with infected hooves due to laminitis, indicating this process is actually quite inexpensive, easy to apply, removes only the necrotic tissue and speeds up healing. In the second part of the lecture she gave a live demonstration: not for the faint hearted!

There was a series of speakers covering thermal imaging to locate soft tissue injuries, shoe modification for different issues, and a guide to using glue-on shoes. Dr Tara Timpson spoke on equine dentistry and how it can affect balance. There were hands-on workshops and competitions, in which Ben Bateman, a local ELPO-certified farrier, did well in the hoof mapping. Hoof mapping is a very accurate way of balancing the foot around the coffin bone, developed by ELPO and veterinary researchers, and is part of the ELPO certification process. ELPO president Steve Foxworth, along with Dr Lisa Dadone, gave an overview of ELPO research done on the equine limb over the years that is now being transferred successfully to zoo animals with similar lower limb structures, i.e. giraffes, to help reduce lameness issues in these animals. Some of the results have been amazing.

All in all a very good and informative conference, and many thanks to the NZERF and ELPO; I will certainly plan to go again!

## 2017 Massey Scholarships

### Tara Gower, Krystal Grant & Heather Scott

The NZERF Massey Scholarships for final year Veterinary Students in 2017 have been awarded to Tara Gower, Krystal Grant & Heather Scott.

Tara's enthusiasm for horses began as a child, caring for and riding the family ponies, and has led to schooling and competing off-the-track Thoroughbreds. She enjoyed competitive eventing while at Secondary School and now takes a keen interest in the New Zealand eventing team's international endeavours. Since 2010 Tara has worked in the X-ray repository at the New Zealand Bloodstock Thoroughbred Sales. Whilst at Massey Tara has been working part time at Wellfield Stud.

Getting her own pony at 13 started Krystal Grant's interest in horses and she has thoroughly enjoyed her subsequent riding and diverse equine experiences. Although she grew up on a small lifestyle block in the Western Bay of Plenty, Krystal has spent summer breaks in the Waikato and Canterbury, working on equine stud farms including Wai-Eyre Farm.

Heather Scott is from North Canterbury. Her passion for working with horses stems from caring for and competing her own pony as a child. Recently, she has trained her own riding horse and played polo. Her main interests in the equine industry are a combination of horse riding, training and equine medicine. Heather's work experience includes a three month summer working position at Rangiora Equine Services.

In congratulating the scholarship recipients, Chair of the NZERF Massey Scholarship Committee Tim Pearce commented that there were a number of quality applications this year and he wished all those pursuing a career in the equine industry all the best in their final year studies.

The NZERF Massey Scholarship is available to final year Veterinary students studying full time. Criteria for assessment include academic record, curriculum vitae, referee reports, an application essay and demonstration of a particular interest in horses. Applications for the 2017 Scholarships close on 30 September, 2017.



Tara Gower



Krystal Grant



Heather Scott

## CHAIRMAN'S CORNER

Despite concerns about declining foal crop size across the industry, New Zealand continues to punch above its weight in racing and equestrian codes. There may be many reasons for this, but when you read about the outstanding young people and researchers in this Bulletin we know that the people we support are part of that success.

Education, which always underpins improvement, is another area that the NZ Equine Research Foundation supports, and this year, the Board is very excited to announce the speakers for the 2017 Rodmor Trust Lecture Series – Jonathan (Jock) Paget, well known equestrian representing NZ in World Games and Olympics, and Dr Alec Jorgensen, equine veterinarian from Hamilton, who will be the team vet for the Oceania Eventing Team again this year. Please see the advertisement in this Bulletin for dates and venues. The Foundation is extremely grateful to The Rodmor Trust for their sponsorship of the series which allows us to bring you these speakers to talk about achieving and maintaining the equine athlete at the top. We encourage you to attend a seminar in your area to hear these speakers share their knowledge – please come along and bring your friends!

Our Board acknowledges with regret the death of Emeritus Professor Des Fielden, a long standing and respected former contributor to our Board and Chairman of the Technical Sub-committee. As can be read in his obituary, Des was a much admired



member of the veterinary community, but he also gave generously of his time to our organisation, including writing a very comprehensive history of the Foundation. We are very grateful for all that he did for the NZ Equine Research Foundation.

**Dr Margaret J Evans | Chair**

## NZERF CONTACT INFORMATION

### The current Board Members are:

Chairman	Dr Margaret Evans	Christchurch	03 312 6615
Vice Chairman	Dr Tim Pearce	Bulls	06 322 2333
Secretary	Mr Allan Fenwick	Marton	06 327 4041

### Representing:

Equine Researchers	Dr Margaret Evans	Christchurch	03 312 6615
ESNZ	Dr Tim Pearce	Bulls	06 322 2333
HRNZ	Mr Edward Rennell	Christchurch	03 964 1180
Massey University	Dr Erica Gee	Palmerston North	06 350 5328
NZEVA	Dr Noel Power	Hamilton	027 286 2126
NZPCA	Mrs Barbara Harvey	Opunake	06 761 8420
NZRB	Mr Peter Benstead	Wellington	021 473 837
NZSBA	Mr Bruce Graham	Christchurch	03 349 8438
NZTBA	Mr Michael Martin	Auckland	09 525 2428
NZTR	Mr Martin Burns	Wellington	04 576 6276
NZTR	Dr John O'Flaherty	Te Aroha	07 884 6817

### THE SECRETARY

New Zealand Equine Research Foundation Inc.  
c/o Manawatu Racing Centre  
P O Box 52, Palmerston North 4440

Phone: **06 356 4940.**  
Fax: **06 354 2885.**  
Email: [nzerf@xtra.co.nz](mailto:nzerf@xtra.co.nz)  
Website: [www.nzerf.co.nz](http://www.nzerf.co.nz)

## ACKNOWLEDGEMENTS

The New Zealand Equine Research Foundation gratefully acknowledges the following organisations who gratuitously distribute the 15,000 Bulletins we produce for horsemen and women throughout the New Zealand Horse Industry.

- The NZ Thoroughbred Breeders' Association (Newsletter)
- NZ Thoroughbred Racing (NZTR Thoroughbred Racing Monthly)
- Harness Racing New Zealand (Harness Racing Weekly)
- The NZ Standardbred Breeders' Association (Newsletter)
- Equestrian Sport New Zealand
- The NZ Equine Veterinary Association (Equine Veterinary Practitioner)
- NZ Farriers Association (Inc) (N.Z.F.A. Newsletter)
- NZ Thoroughbred Owners Federation (Bulletin)
- Taranaki Miniature Horses (Newsletter)
- The Morgan Horse Association of NZ Inc. (Newsletter)
- NZ Hanoverian Society (Inc.) (Newsletter)

THE NZERF BOARD THANK DR ANDREA RITMEESTER AND MATAMATA VETERINARY SERVICES FOR EDITING THIS BULLETIN

DISCLAIMER "The Foundation Bulletin" is published by the New Zealand Equine Research Foundation. The views expressed in the articles do not necessarily represent those of the New Zealand Equine Research Foundation nor the editor and neither the New Zealand Equine Research Foundation nor the editor endorses any products or services advertised. The New Zealand Equine Research Foundation is not the source of the information reproduced in this publication and has not independently verified the truth or accuracy of the information contained herein. Neither the New Zealand Equine Research Foundation nor the editor accepts any liability whatsoever for the contents of this publication or for any consequence that may result from the use of any of the information contained herein or advice given herein. This provision is intended to exclude the New Zealand Equine Research Foundation, the editor and staff from any liability whatsoever, including liability for negligence in the publication or reproduction of the material this publication contains.