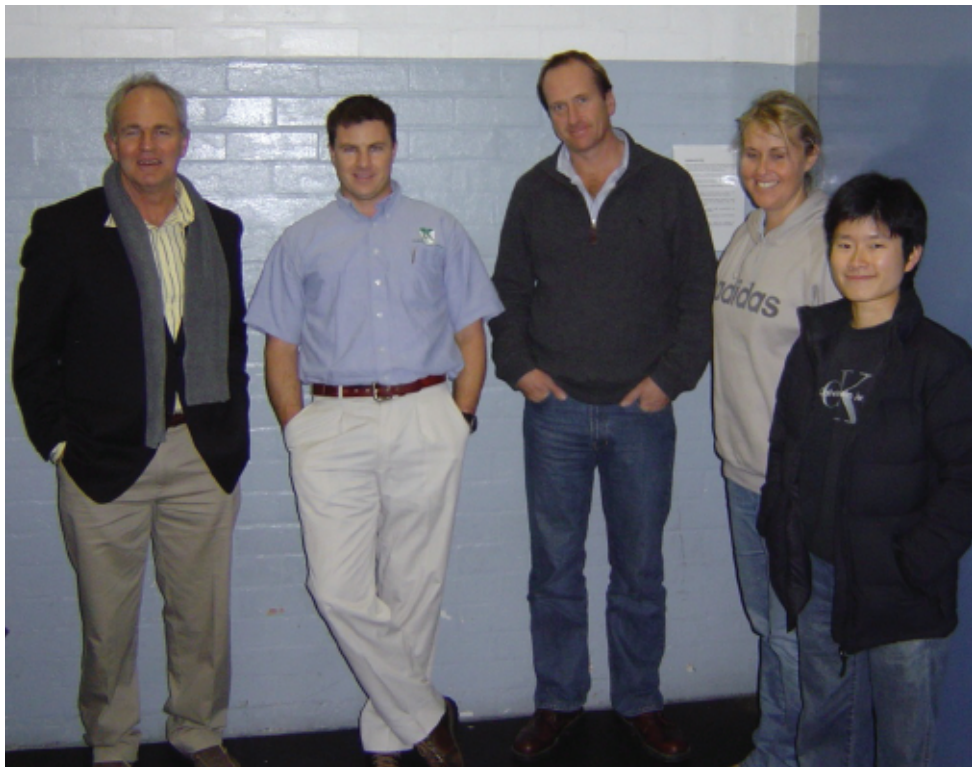




"Pictured at the Randwick VBT *Regenicell* course L-R are Dr. Graeme Blanch (Victoria), Dr. Chris O'Sullivan (Randwick Equine Centre Course Instructor), Doug Black (New Zealand), Jacqui McGregor (Victoria) and Lucy Shum (Hong Kong)"

VBT *Regenicell* trained veterinarians now number over 100

Former VBT Project Manager Jeremy Gask organised veterinarian training courses in Sydney, Adelaide and Perth in June and July 2007 building the number of veterinarians trained in VBT's Stem Cell Therapies (now trade-named *Regenicell*) to over 100. Vet Biotechnology is now represented in every State of Australia, New Zealand and Hong Kong. The performances of horses returning to the racetrack following *Regenicell* treatment has created a new wave of interest in the regeneration of tendon and ligaments through VBT's purified and expanded Stem Cell Therapy. Should your horse have suffered a tendon or ligament injury contact VBT on 08 8367 0744 for a list of VBT accredited veterinarians available in your locality.

Adult Mesenchymal Stem Cells derived from either bone marrow or the umbilical cord at birth are currently being used in tendon and ligament regeneration. VBT is undertaking research to expand the suite of treatments to include bone, cartilage and muscle. In the future banked Stem Cells may be used to treat OCD, articular cartilage damage and myocardial infarcts to mention just a few of the areas of therapy for these amazing multi-potent cells.

Vet Biotechnology

ACN 105 577 017

HEAD OFFICE

Level 1, 157 Melbourne Street
NORTH ADELAIDE SA 5006

Phone: (08) 8367 0744

Facsimile: (08) 8367 0766

Email: info@vetbiotechnology.com.au

Website: www.vetbiotechnology.com.au

WAREHOUSE AND

DISTRIBUTION CENTRE

109 Little Rundle Street
KENT TOWN SA 5067

Research Update

VBT is partnering Cytomatrix in new advanced materials CRCs. In particular the development of a closed tissue culture device for MSCs is at the top of the list of possible project collaborations. The derivatives of the project are expected to generate technology that will reduce the time to expand Mesenchymal Stem Cells into therapeutic doses and may also be used in the treatment of bone and cartilage conditions such as *Osteo Chondrosis Dissecans* (commonly know as OCD). OCD is regarded as one of the most significant sources of economic loss for breeders who breed to sell at the annual round of Yearling Sales throughout Australia and New Zealand. Many yearlings, particularly those of high value, are now X-rayed prior to sale as a tool for veterinarians to diagnose existing conditions and also make a classification as to the risk associated with radiographic changes. Those risks are usually classified into five categories:- low risk, low-medium risk, medium risk, medium-high risk and high risk.

In the future, early detection and diagnosis of problems through radiography combined with the emerging Stem Cell Therapies for treatment of these conditions may significantly reduce the losses experienced by breeders at Yearling Sale time. The Mesenchymal Stem Cells (MSCs) that we derive from the Umbilical Cord at birth are proven to form Bone, Cartilage, Tendon, Ligament and Muscle.

It has also been suggested (refer to the EBN article reprinted in this newsletter) that MSCs may be used to regenerate the muscle tissue tone loss associated with *Left Laryngeal Hemiplegia* or "Roarer Syndrome" as it is sometimes referred. The multi-potent nature of MSCs leads us to believe that the suite of treatments available to ensure that horses are given the best chance to reach the racetrack, maximise their potential and continue to race successfully in the long term will be significantly expanded in coming years.

The use of scaffolds to ensure that MSCs remain localised in the affected area and accordingly differentiate along the desired path is a challenge that Vet Biotechnology is meeting through partnering with researchers involved in other Animal and, of course, Human Stem Cell Therapies.

Opt-in for Vet News

"The future is now! For your horses to be their best, call us on 08 8367 0744 to be added to the mailing list for updates from Vet Biotechnology Limited"



Vet News



Issue 3, July 2008 - Vet Biotechnology Newsletter

Company Update

Welcome to the third edition of **Vet News**.

Saturday April 19, 2008 proved to be a watershed day for the **VBT** Stem Cell Project with wonderful performances from Valedictum (Rosehill), Lanson (Cheltenham), King Wally (Ascot) and Gorky Park (Caulfield) and a significant indicator of the nation-wide uptake of the tendon and ligament regeneration technology (now trade named *Regenicell*).

Over 50 treated horses from several performance arenas are now post-rehabilitation. Please turn to the middle pages of this newsletter for the latest statistics on this remarkable therapy. Retirement due to breakdown in the performance horse is rapidly becoming a thing of the past and we eagerly await the return of champion racehorse *El Segundo* following his *Regenicell* treatment with autologous Mesenchymal Stem Cells (MSCs) by VBT accredited veterinarian Dr. John van Veenendaal earlier this year.

Regenicell is now the Gold Standard in tendon and ligament regeneration.

After the hiccup of Equine Influenza in 2007, VBT re-launches its *Stembank* technology for the approaching foaling season.

Selling yearlings with MSCs stored from the umbilical cord collected at birth will be a significant marketing tool and a wonderful value-add for buyers. Breakdown is the biggest risk associated with yearling purchase. *Stembank* yearlings come with Gold Standard protection.

The **VBT** Rattles Diagnostic and Vaccine Project is entering phase II as this Newsletter goes to print. Leading stud 'Blue Gum Farm' is actively pursuing techniques to manage this industry menace. See inside for their tips.

Also, VBT's Equine Gastric Ulcer Syndrome (EGUS) Project was recently boosted by the sign-on of Associate Professor Gordon Howarth to refocus investigations.

VBT's success stories are giving the performance horse industries great confidence. Please feel free to call me personally on 08 8367 0744 for updates or further details on how the Company's product range can grow your horse business.

David Bridgland
General Manager

Vet Biotechnology

ACN 105 577 017



Gorky Park pictured pre-injury in early 2007. He is now Melbourne Cup bound (see inside).

Stembank re-launched for the 2008 Stud Season



Stembank, the collection of valuable Stem Cells from the umbilical cord at foal birth, will be re-launched this stud season on the back of extensive 'proof-of-concept' data from mature horses returning to the racetrack following Stem Cell tendon and ligament treatment. Please see inside for details of the first group of returning horses that have now won over \$1 million. **Widden Stud (NSW)** has kindly agreed to include a further update in their pre-stud season edition of the *Whinnies* newsletter. (To opt-in for *Whinnies* contact **Widden** on 02 6549 9999).

Leading studs **Lindsay Park (SA)**, **Chatswood (VIC)** and **Coolmore (NSW)** are the first to book *Stembanks* for their foaling broodmares in season 2008.

Umbilical Cord (UC) collection is now also available in Europe and was the opening topic presented by Dr. Ciara Field-Corbett on Day Two of the Irish Thoroughbred Breeders Association (ITBA) Trade Fair. EBN have kindly given VBT permission to reprint this lead article, see inside this newsletter.

Pricing to collect these valuable cells from your foal's UC in 2008 :-

- \$270 + GST for collection kit and shipping (paid with *Stembank* Booking),
- \$900 + GST invoiced when Stem Cells are successfully cryo-stored.

See your Information Pack for a Brochure and Booking Form.

Blue Gum Farm cares for your foal

Also reprinted in this edition of Vet News is the 2007 **Blue Gum Farm** *Rattles* guide printed in response to a very dry 2007. *Rattles* tends to be a more prevalent in drier years. Rains have been better this winter, however, as the drier months approach, take care to ensure that your risk is minimised as foals hit the ground in 2008.

Vet Biotechnology is developing a DNA-based Rattles vaccine in conjunction with the University of South Australia's Professor Mary Barton and Dr Michael Heuzenroeder. Subject to funding the three-year project is hoped to be completed in mid-2011 with vaccine on the shelf for the 2011 stud season.

To opt-in for future editions of this informative publication contact Blue Gum Farm on 03 5795 3331.



Rhodococcus Equi Observation - a valuable tool

With many mares and foals now returning home from stud farms to their owners properties, we feel it is important to remind breeders of the importance of their observational skills. As we head into the hotter months of a drought year, observing changes in foals is a crucial element in the early diagnosis of rhodococcus equi, or 'rattles' as the disease is commonly referred to, which tends to be a lot more prevalent under these climatic conditions.

Rattles - What is it

Rattles is the colloquial term that describes the lung infection in foals, aged typically between three to six months, caused by the bacteria rhodococcus equi. This bacteria multiplies in dry soil and faeces during the warm and hotter months of late spring and summer and infection occurs via the inhalation of contaminated dust. Abscesses form on the foals lungs and if not detected early enough, the disease can be fatal. Stresses such as

float trips can bring this disease to a head which is why we feel it is important for breeders to be aware of it now that foals are travelling home at the end of the stud season. The bacteria does not cause infection in yearlings or older horses.

Symptoms

An infected foal may simply present with a dry cough, hence the term 'rattles'. Obviously not all foals that cough at this time of the year are going to be infected and a check of the foals temperature at this time would be very beneficial. An elevated temperature would heighten suspicion. Heavy or 'thick' breathing can also be present and foals may appear depressed and lethargic, their coat may be of a dry appearance and their mothers may have an enlarged udder or be running milk if the foal has gone 'off the suck' due to not feeling 100%.

Treatment

Scanning of the foals lungs will confirm if abscesses are present and whether the foal should be treated. If necessary, the foal is treated orally with

an antibiotic called clarithromycin, the specifics of which should be discussed with your equine veterinarian. The dose a foal may require is determined by its weight and the length of the course determined by the size of the abscesses being treated and the response to the treatment. Follow up scanning is required to determine this. Diagnosed and treated early enough, foals will make a full recovery.

Prevention

Whilst it is impossible to fully eradicate rhodococcus equi due to its method of travel, the management of a property can greatly reduce the build-up of infection loads in the soil. These basic points will assist in the management of this disease.

1. Reduce the build up of droppings in paddocks and yards.
2. Avoid overstocking paddocks and yards, hence reducing the build up of dust and dry soil
3. Reduce the level of dust created by vehicle traffic and the movement of livestock around a property.

Reprinted with the permission of Blue Gum Farm

Trade-name *Regenicell* launched

Vet Biotechnology's Bone Marrow-derived Mesenchymal Stem Cell Service for the treatment of tendon and ligament injuries in the mature horse has been named ***Regenicell***.

Regenicell replaces "Bone Marrow-derived Mesenchymal Stem Cell Service" and has now been registered throughout the States of Australia and New Zealand.

Veterinarians please note: New Order Forms are being printed to reflect the change and also the include the option for Storage of therapeutic doses of MSCs for use in future injury and illness treatment.

Gorky Park now for the Melbourne Cup

Following his emphatic five length victory in the time-honoured Andrew Ramsden Stakes (registered as the Duke of Norfolk Stakes) over 3200m, *Regenicell* horse Gorky Park is now resting in preparation for a tilt at the 2008 Melbourne Cup. Trainer David Hayes said that "The tendon now seems stronger than ever, I don't think it will give him any more trouble". The talented son on Montjeu (IRE) has now won \$167,800 since his *Regenicell* treatment in May 2007.

Veterinarians: Don't forget to recommend *Regenicell* Storage!

The recent metropolitan win of *Lanson* ratifies the cryostorage of therapeutic doses of MSCs. *Lanson* had a successful ***Regenicell*** treatment to his off-fore Superficial Digital Flexor Tendon (SDFT) in August 2005 and according to regular track rider David Tootell was "working the place down" post-rehabilitation in September when he discovered a slight filling in the horse's near-fore SDFT.

A scan revealed a tear in the 7yo's contra-lateral tendon and after discussion with *Lanson*'s owner Mark Conroy, a stored ***Regenicell*** sample was retrieved from liquid Nitrogen and a treatment for the tendon in the opposite leg to that first treated a year earlier was undertaken by Dr Darren Arnold of the Morphetville Equine Clinic.

Rehabilitation was uneventful and following a string of second placings including the 2008 Terang Cup and with both SDFT's now regenerated through Stem Cell technology, the horse won the \$30,000 Spring Gully Foods Open Handicap at Cheltenham.

Trainer Mick Clark (Horsham, Victoria) is delighted with the horse's progress and Mark Conroy hopes to repeat Lanson's 2005 Darwin Cup success with another tilt at the Northern Territory's most important race in August this year.

"*Regenicell*"

Bone Marrow derived Mesenchymal Stem Cell Service

Latest Australian Stem Cell Results at 1/06/2008

		Follow Up group			
Use	Total treatments*	Total horses post-rehab.	Related re-injuries	Return to Competition post-rehab.**	Return to full work without re-injury post rehabilitation***
Racing & Pacing	116	52	5	32 (62%)	38 (73%)
Others	5	5	1	3 (60%)	4 (80%)
Total	121	57	6	35 (61%)	42 (74%)

*excludes 5 horses that died due to un-related events
** excludes 5 racehorses and 1 pacer that have reached full work and have not suffered a related reinjury but are yet to return to competition.
*** includes 5 racehorses and 1 pacer that have reached full work and have not suffered a related reinjury but are yet to return to competition. (eg. trials, galloping, showing)

Verified Performance Statistics at 1/06/2008

		Racing Follow Up Group (Thoroughbreds & Standardbreds)			
Use	Number reaching competition	Individual winners (races won)	Total Racecourse Starts	Prizemoney Won	Prizemoney Won Per Start
Racing	30	15 (23)	192	\$996,610	\$5,191
Pacing	3	3 (10)	23	\$70,658	\$3,072
Total	33	18 (33)	215	\$1,067,268	\$4,964

ITBA Trade Fair Day Two Emphasis on Breeding and Welfare

The emphasis on the second day of the International Trade Fair at Goffs was breeding and welfare, following on from a highly successful opening day when the attendance figure of 600 exceeded expectations. "We are delighted with the success," said Joe Hernon, Chairman of the ITBA. "We are grateful for everyone's support and I hope this event becomes a regular feature on the bloodstock calendar." Sophie Hayley of Tattersalls Ireland was one of the many exhibitors to agree that the opening day had been a positive one.

"The organisers have done a fantastic job marketing and promoting the Trade Fair and it was great to see so many students yesterday." Irish Thoroughbred Marketing also reported a large level of interest from young racegoers and the organisers were pleased and surprised by the large number of visitors from other sectors of the equine world. This was reflected by Bernie Leadon, representing Foran Equine Products: "I really didn't expect this level of interest and we have generated so many orders over the first two days we will certainly host a stand again."



Stem Cell Therapy

The first seminar was given by Dr Ciara Field-Corbett on the subject of Stem Cell Therapy for horses. Explaining that stem cells are those capable of unlimited selfrenewal, Ciara pointed out that those currently used in equine medicine are not embryonic and are therefore non-controversial and present no ethical issues. This also means they are easily attainable by three methods: extracted from the bone marrow, which involves anaesthetic and invasive surgery; extracted from adipose tissue, which is a non-invasive procedure; and extracted from the cord blood at birth, which is the simplest of the procedures and does not require a vet. An additional bonus with the latter method is that the stem cells have not yet suffered the wear and tear of those in an adult animal. In all cases only the cells collected from the individual may be used in therapy. Once harvested, the uses of stem cell therapy are widespread. Occurring naturally in the bloodstream, stem cells set out to heal and repair injury as quickly as possible, but this quick fix results in scar tissue and inflammation. By administering the cells directly to the site of injury, blood supply is promoted and inflammation suppressed without scar tissue. This makes therapy particularly effective in tendon injuries, suspensory ligament injuries, cartilage repairs and fractures, especially sesamoids.

Ciara added that the potential to use this therapy in respiratory conditions is a possibility for the immediate future. With a number of companies offering low cost collection and storage of cells, it is reasonable to expect all foals born within the next few years to have their stem cells banked, a prospect that cannot prevent injury but can limit the damage to their racing careers.

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