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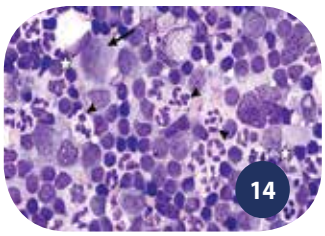
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STREET ADDRESS
47 Gemsbok Avenue, Monument Park, Pretoria, 0181, South Africa

POSTAL ADDRESS
P O Box 25033, Monument Park Pretoria, 0105, South Africa

TELEPHONE
+27 (0)12 346-1150

FAX
General: +27 (0) 86 683 1839
Accounts: +27 (0) 86 509 2015

WEB
www.sava.co.za

CHANGE OF ADDRESS
Please notify the SAVA by email: debbie@sava.co.za or letter: SAVA, P O Box 25033, Monument Park, Pretoria, 0105, South Africa

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Sonja van Rooyen
assistant@sava.co.za
+27 (0)12 346 1150

DISPLAY ADVERTISEMENTS
Sonja van Rooyen
assistant@sava.co.za
+27 (0)12 346 1150

DESIGN AND LAYOUT
Sonja van Rooyen

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President: Dr Leon de Bruyn	president@sava.co.za
Managing Director: Mr Gert Steyn	md@sava.co.za/ +27 (0)12 346 1150
Editor VetNews: Dr Paul van Dam	vetnews@sava.co.za
Bookkeeper: Ms Susan Heine	accounts@sava.co.za/+27 (0)12 346 1150
Bookkeeper's Assistant: Ms Sonja Ludik	bookkeeper@sava.co.za/+27 (0)12 346 1150
Secretary: Ms Elize Nicholas	elize@sava.co.za/ +27 (0)12 346 1150
Reception: Ms Hanlie Swart	reception@sava.co.za/ +27 (0)12 346 1150
Marketing & Communications: Ms Sonja van Rooyen	marketing@sava.co.za/ +27 (0)12 346 1150
Membership Enquiries: Ms Debbie Breeze	debbie@sava.co.za/ +27 (0)12 346 1150
Vaccination booklets: Ms Debbie Breeze	debbie@sava.co.za/ +27 (0)12 346 1150
South African Veterinary Foundation: Ms Debbie Breeze	savf@sava.co.za/ +27 (0)12 346 1150
Community Veterinary Clinics: Ms Claudia Cloete	cvcmanager@sava.co.za/ +27 (0)63 110 7559
SAVETCON: Ms Corné Engelbrecht	corne@savetcon.co.za/ +27 (0)71 587 2950



Leon de Bruyn

Dear Colleagues,

Wow, what a bizarre July we just experienced. As our nation battled with the icy grip of winter and the onslaught of the third wave of the COVID-19 Pandemic, several citizens would have expressed some satisfaction when controversial former President Jacob Zuma was finally sentenced to some well-deserved jail time. We might well have expected some non-COVID regulation compliant protests, as some of Mr Zuma`s supporters have never had much respect for the rule of law.

However, I doubt that many of us anticipated that the unrest would have been seized upon by so many opportunists and professed desperate people. We were shocked by unprecedented levels of looting, extending even to our SAVA-CVC`s, as well as other veterinary practices and animal health care facilities. Our support, thoughts and prayers go out to those individuals and businesses affected by the insurrection. These dramatic events are a stark reminder of the harsh economic realities facing our nation as we still battle to recover from the world financial crisis, the high level of looting in the Zuma-Gupta years, our ESKOM and other SOE conundrums, and now the fall out of the pandemic. It has truly been another case of "Cry the Beloved Country". It is crucial that we pray for calm leadership and peace amongst this turmoil. What was encouraging to note was how South Africans from all walks of life stood shoulder to shoulder to defend property and people. It is remarkable how resilient we are in adversity, in addition to our renowned ability to celebrate victories together. Kudos must also go to the oft maligned taxi drivers and associations for backing up the overwhelmed SAPS and SANDF in restoring law and order. Let us hope we can learn from this debacle and work in unity to recover and engender respect for our justice system as well as people`s and property rights.

SAVA has provided the WVA with input requested regarding the veterinary profession`s position in COVID-19 vaccine roll-out programs. It is interesting to note that this fight to include vets in essential workers vaccine lists is now been taken up at an international level. We do however suspect that here in South Africa, most colleagues will have been vaccinated in line with their age bracket before we receive a reply from the Department of Health to any of our letters sent requesting the rectification of the omission of vets from the list!

Also on the international front I have been invited to attend the American Veterinary Medical Associations (AVMA) Hybrid House of Delegates (HOD) meeting and Convention at the end of July. I have also recorded a message from SAVA that will be broadcast at the AVMA HOD meeting. I have furthermore been invited to attend the Virtual Canadian Veterinary Medical Association Convention in August. At least with the advances in meeting technology since the pandemic, we are able to meet with our international colleagues on a more regular basis, albeit in a virtual capacity. The COVID-19 pandemic and our successful bid to host the 2024 WVA Congress has led us to re-shuffle our International Veterinary Officers Convention (IVOC) hosting schedule. The NZVA will host a virtual meeting later this year, the BVA will host in Abu Dhabi next year, the CVMA in 2023, with SAVA hosting in Cape Town in 2024.

We have good news regarding the vacant position of Director of Finance. Dr Tom Spencer, who is also our EduCom Chair, has volunteered to focus on his second love of accounting, and take on this vital position.

The SAVA BoD has approved his nomination and now we just await ratification by FedCo. We are also happy to announce progress in the appointment of a successor to outgoing VetNews Editor Dr Paul van Dam. We hope to be making an announcement shortly. We would like to again thank Paul for his considerable efforts over the years from the "Dam Wall" in editing our SAVA magazine.

The 26th of July was quite busy with the proud opening of the new MRI facility at the Onderstepoort Veterinary Academic Hospital (OVAH) and a SAVA Animal Ethics and Welfare Committee (AEWC) meeting, both of which I attended in a virtual capacity.

SAVA and RuVASA stalwart, Dr Faffa Malan, is at the time of writing, showing some improvement after complications following what was eventually confirmed to be a COVID-19 infection, and is hopefully leaving ICU for a step-down facility. Our thoughts and prayers are with Faffa for a full recovery. My wife Annamie and I have ourselves just gone through a COVID infection. Thanks to the grace, protection and healing power of our Lord, and the surprise anti-viral efficacy of Ivermectin, our symptoms were relatively mild. We really appreciate the support of all those who interceded for our recovery.

We remind you again to register and download our SAVA D6 communicator App which we launched in April. The D6 App provides you with an excellent interactive opportunity to receive important general as well as specific tailored information from SAVA, as well as optimise your member benefits. All members should have received SMS`s to register, as well as an email detailing download instructions. Please sign up and see what more SAVA can do for you.

As our nation emerges from the turmoil of July and the fallout of many of the other calamities mentioned above, let us honour the legacy of our late statesman President Mandela, who strove so hard to unify our country. It is crucial that we maintain our faith in our democracy and our Lord, and work together to make South Africa a better place for its people and animals.

Nkosi Sikelel iAfrika!

Yours in recovery and reconciliation,

Leon

(Beste kollegas – ek het besluit om in hierdie, my laaste uitgawe as redakteur, nie die president se boodskap te vertaal nie. Ek wonder al lankal waarom dit nodig is – die res van die tydskrif is in elk geval net in Engels… So, as jul daarteen beswaar wil maak, doen dit gerus. As jul nie beswaar maak nie, is dit 'n boodskap aan die nuwe redakteur – moenie moeite doen om die boodskap te vertaal nie! Groetnis, Paul)

EXECUTIVE REPORT FOR SAVA MEMBERS: NATIONAL ANIMAL HEALTH FORUM

This report is intended to inform SAVA members on the activities of the National Animal Health Forum (NAHF). If members require more information or want to contribute/give inputs as to any of the activities, please feel free to contact me directly.

The NAHF consists of:

- **Full Members:**
  - Red Meat Producers Organization (RPO)
  - National Wool Growers Association (NWGA)
  - SA Veterinary Association (SAVA)
  - SA Animal Health Association (SAAHA)
  - SA Mohair Growers Association (Mohair SA)
  - Milk SA (MPO and SAMPRO)
  - SA Poultry Association (SAPA)

- **Agreed Associate Members:**
  - Animal Feed Manufacturing Association (AFMA)
  - SA Feedlot Association (SAFA)
  - Wildlife Ranching SA (WRSA)
  - SA Federation for Small Stock Breeders Societies (FSB)

- **Proposed Members to be recruited:**
  - SA Federation for Livestock Auctioneers (SAFLA)
  - SA Pork Producers Organization (SAPPO)
  - Red Meat Abattoir Association (RMAA)
  - SA Stamboek / SA Studbook
  - Livestock Registering Federation (LRF)
  - SA Ostrich Business Chamber (SAOBC)
  - SA Equine Health Protocol (SAEHP)
  - National Emerging Red Meat Producers (NERPO)
  - African Farmers' Association of South Africa (AFASA)

Projects are identified by the NAHF who appoints members to take responsibility. For each project Terms of Reference and Project Management Sheets are developed for proper management.

Current Projects

- Animal Health
  - Disease Control and Surveillance
  - Epidemiological Surveillance
  - Compulsory Community Services
  - One Health
  - Proposed amendments to table 2 Animal Diseases Act
  - Veterinary Procedural Notice (VPN) Development
  - Disease Prevention and Control
    - DALRRD-NAHF Risk Mitigation & Compensation Committee
    - Community of Practice
    - Brucellosis Steering Committee (BSC)
    - Buffalo Controlled Diseases Committee
    - Foot and Mouth Disease (FMD) Steering Committee
    - Marketing Access
    - Boundaries
    - Animal Identification and Traceability
    - Control Strategies and FMD VPN
    - FMD Technical Task Team
    - Biosecurity
    - ASF
    - Avian Influenza
- Veterinary Public Health, Feed and Food Safety
  - Food and Feed Safety
    - Regulation, Authorization, Inspection of Establishments
    - Independent Meat Inspection
    - Animal Feed Safety
    - Bovine Spongiform Encephalopathy (BSE)
  - Control of Veterinary Medicine and AMR
    - Veterinary Medicines and Biological-SAAHA
    - SAEHP AHS Vaccine Working Group
    - Residue Testing
    - Antimicrobial Resistance and Residue Monitoring Oversight Committee
  - Veterinary Laboratories
    - Access to Veterinary Laboratory Diagnostics
    - National Laboratory Infrastructure
    - Laboratory Quality Assessment
  - Animal and Products Identification, Recording and Traceability (AIRT) System
    - Animal Identification
    - Livestock Identification and Traceability SA Committee
    - ID and Traceability of Product of Animal Origin
  - Animal Welfare
    - Livestock Welfare Coordinating Committee
    - DALRRD-NAHF Liaison Committee

The issues being discussed at the various Provincial Animal Health Forums were:

- Eastern Cape AHF
  - Domesticated Animal list concerning the movement of animals
  - Heartwater Vaccine
  - Implementation of the biosecurity rules at auctions
- Gauteng AHF
  - Awareness campaign on ASF
- Kwa-Zulu Natal AHF
  - Trichinella Bull testing project
  - Rabies vaccination
  - Brucellosis
- Northern Cape AHF
  - Bluetongue
  - Lumpy Skin Disease
  - Rift Valley Fever - Rift Vax
- Western Cape AHF
  - ASF

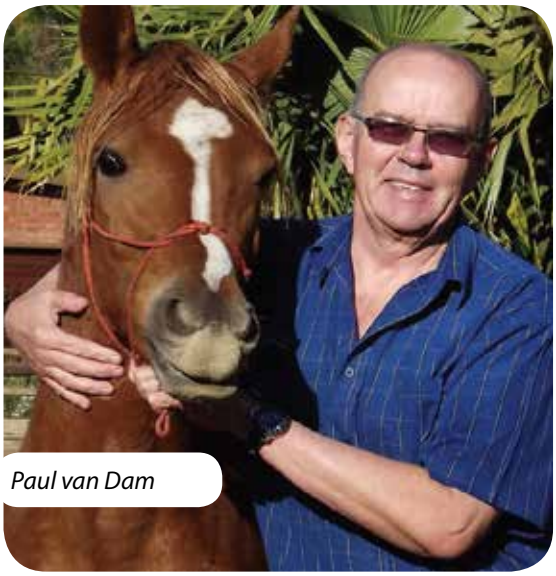
New projects proposed/envisaged

- A Disaster Management Program for Livestock
- Animal Pounds Act
- Live Export

As stated, if you want to get more information, give inputs, or more importantly get involved in any of these projects/activities, please contact me.



Dr Paul van der Merwe
President-Elect



Paul van Dam

Reflections from a **Dam Wall**

To everything, turn, turn, turn,
There is a season, turn, turn, turn,
And a time for every purpose under heaven.

Lyrics of a song I first heard being performed by The Seekers. With a connection to the third chapter of the Old Testament book Ecclesiastes.

Indeed. A time to start a new job, and a time to end it. In my case, being editor of VetNews, a responsibility I took on in 2014 at the request of then president, Henk Basson. This, the August 2021 issue is my 87th, and my last. The time has come for someone else to take over, to perhaps recreate VetNews, to breathe some fresh air into its lungs and give it a new life.

During this period, I have experienced all sorts of times and seasons. Good ones. Joyous ones. Sad ones. Frustrating ones. Struggling to meet deadlines, as it sometimes seemed impossible to find enough material to fill the pages. Fill them I did, and I hope that you enjoyed reading most of it. That you also learned something from it. That you laughed, cried, felt sad and good, as I did when I edited the articles, eulogies, recollections and stories.

A heartfelt thanks to those who, without fail, made regular contributions. Apologies for not naming you all – you all know who you are, and not naming you prevents me from missing someone.

To my (as yet unnamed) successor – I wish you well and hope that you will be supported by those who should. That you will also be able to establish a group of supporters, regulars.

Enough said. Allow me to close with the words of a poem that one of my good supporters sent me:

Isn't it strange how princes and kings,
and clowns that caper in sawdust rings,
and common people, like you and me,
are builders for eternity?

Each is given a list of rules;
a shapeless mass; a bag of tools.
And each must fashion, ere life is flown,
A stumbling block, or a Stepping-Stone.

(R. Lee Sharpe)

You be the judge. And I hope that, despite saying goodbye, I will still be a good boy… V

Regards,

Paul van Dam



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ANIMAL HEALTH IS IN OUR DNA



Another first for UP's Onderstepoort Veterinary Academic Hospital



The new MRI being carefully offloaded at the OVAH

The Onderstepoort Veterinary Academic Hospital (OVAH) of the University of Pretoria's (UP) Faculty of Veterinary Science has acquired its first magnetic resonance imaging (MRI) scanner. Not only a first for the OVAH, but also South Africa and probably Africa too, as this is the first high field MRI scanner with image acquisition optimised for veterinary patients. Gone are the days that the hospital had to make special arrangements with human hospitals and do very early morning trips to these facilities to perform MRI scans.

How love impacts on science!

Born in 1913 in Portsmouth, England, Miss Betty Noakes' parents moved to South Africa in 1917. In 1924 the family moved to Louis Trichardt. Miss Noakes had a passion for education and literature, qualified as a teacher and taught English and history on the East Rand for many years before retiring to her beautiful farm in Louis Trichardt, which extended from the town to the crest of the Soutpansberg. She built a school on her farm where it bordered on Songozwi Village and school kids were treated to excursions to Thulamela and Mapungubwe as well as Chsitmas celebrations, where Aunty Betty was both sponsor and guest of honour. She also sponsored the children of the families who lived on her farm in schooling and tertiary education.

Those who knew her remember her as loyal, supportive, encouraging and fun, with a great sense of humour and a love for animals. And it was this love that made the new MRI at the OVAH possible. She passed away in 2011 and left almost 95% of her estate to animal welfare and other charities – but the biggest part of her estate, almost R16 million, was left to the Faculty of Veterinary Science, earmarked to be used "to the benefit of animals".

On 26 July 2021, the Onderstepoort Veterinary Academic Hospital officially opened its first ever magnetic resonance imaging scanner and facility, made possible by one legendary lady's love for animals.



During installation



Wiskey the dog is being prepared for a scan with Sr Sinazo Nikelo assisting.

Back to the OVAH

"In South Africa, the use of MRIs for diagnostic purposes is limited to small animals, and most MRI scans are done in human facilities by special arrangement," said Dr Paul van Dam, Director of the OVAH. "An MRI scan takes 45 minutes or longer, which limits the number of cases that can be referred.

With our own MRI scanner, we can now do scans at any time of the day, on site, without the additional time to travel to another facility." In the past, MRI scans were done at human facilities on a variety of animal species, including several highly trained working dogs and a lion, whose central nervous system symptoms revealed that the animal was afflicted with hypovitaminosis A.

MRI scanners differ in strength in terms of the magnetic field being used, which is rated in Tesla (T) units. Stronger magnetic fields make for faster examinations, with greater detail and clearer pictures compared to lower-strength units. "The new MRI scanner at the OVAH is a 1,5T unit, which is believed to be the strongest unit in veterinary use anywhere in Africa," Dr Van Dam said. "The unit also has the biggest diameter bore [the scanner's diameter] available, which allows us to scan the bodies of even the largest dogs and many other animals – including wildlife such as big cats and great apes – on the built-in table. We can also scan the limbs and necks of larger animals like horses on a purpose-built [and locally designed] table."

Magnetic resonance imaging is the newest form of imaging in general use today. Through this method, the molecules in the body resonate when a magnetic field (of up to 60 000 times as strong as the magnetic field of the earth) is applied to them.



Wiskey in the new MRI scanner

>>> 8

Another first for UP's Onderstepoort Veterinary Academic Hospit.. <<< 7

A short pulse of radio waves is applied, and a weak signal is echoed back from the body tissues; the echo varies depending on the type of tissue involved. MRI scanners have been used in human medicine since 1977, and have been used in veterinary medicine since the mid-1990s. MRI imaging is the diagnostic method of choice when there is low contrast between neighbouring tissue types. This includes the brain – where the MRI distinguishes between grey matter, white matter, nerves and cerebrospinal fluid – as well as the locomotor system, where it can distinguish between muscle, tendons and ligaments surrounding joints, joint fluid and joint cartilage. Lesions of the spinal cord are also best visualised with MRI imaging.

"By providing excellent images of soft tissue, MRI scans enable the clinician to make an accurate and often early diagnosis, allowing properly targeted treatment plans," said Dr Van Dam.

"The acquisition of the MRI scanner provides the hospital with a comprehensive set of imaging modalities including conventional radiographs [X-rays], ultrasound, scintigraphy, computed tomography [CT] and now magnetic resonance imaging [MRI]," said Professor Vinny Naidoo, Dean of the Faculty of Veterinary Science at UP.

Prof Tawana Kupe, Vice-Chancellor and Principal of UP, who officially opened the new facility, also acknowledged the importance of the new acquisition. "Over the years, the OVAH has distinguished itself on various levels. It has now begun another exciting chapter in the faculty's more than 100-year history – the beginning of a new era in service delivery and patient care. It reinforces the hospital's invaluable role and position as the country's leading veterinary hospital."

(Editor's note: The photograph on the cover of this edition of VetNews shows Lulama Nsele, a veterinary student, with Bear, a Yorkshire terrier and the first ever patient in the MRI facility)

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How a handful of veterinarians saved millions of human lives and eradicated a disease from the Earth – Part 2

May 24, 2021 by Juan Pascual (@juanpascual4), veterinarian

From https://jpascual.scienceblog.com/, reprinted with permission

American President Roosevelt knew first-hand the consequences of an infection. At the age of 40, he suffered a paralysis that he would live with for the rest of his life. Polio preyed on the little ones, but adults were not safe, either.

Now the war was his main concern and the dossier that had just arrived from the defence staff convinced him that he must act quickly. American intelligence knew that the Japanese were successfully developing biological weapons. In Manchuria, Unit 731 of the Japanese Army experimented with typhus, plague and cholera. His victims numbered in the hundreds of thousands. It was essential to have vaccines and medicines that could neutralise a Japanese biological attack. And the US military got down to work and not only to defend itself from attacks on its human population but also to protect animals.

The island of Grosse is a small point on the map in the enormity of Canada. Located on the Saint Lawrence River, this island was the entry and quarantine point for the thousands of Irish emigrants who arrived on the coast of the country fleeing the great famine of 1845-49 due to the poor potato harvest. Many died there of typhus and cholera. It is the largest cemetery due to the great famine outside of Irish territory. It closed its doors in 1932, but reopened them ten years later to, this time, deal with rinderpest. The Americans knew that if the virus reached their territory, the cattle lacked defences completely, so it was imperative to immunise them with a vaccine, but to do so, the responsible virus had to be brought to American soil, with the risks that this entailed. The solution? Focus all the investigations on an isolated space such as the Island of Grosse.

The US Army was successful, in 19 months they had a new vaccine ready.



Junji Nakamura

We have already seen how the Japanese knew about the disease and had not stopped making progress on its control: the veterinarian Junji Nakamura managed to attenuate the virus after repeated passage through a non-target intermediate species: the rabbit. Protecting cattle in Japanese territory was critical to the war effort. The American soldier was the best fed of the war, not so the Japanese. Protecting the herds was extremely important. The use of lapinised vaccine (passed more than 100 times per rabbit) was widespread in Asia. The reproduction of the plague virus had no secrets for the Japanese. On his part, Hitler ruled out biological warfare altogether from the start, and although his lieutenant Himmler toyed with the idea, there were no real efforts to make it happen. This was not the case with the Empire of the Rising Sun.

The Japanese accelerated their tests and the Americans, on the Island of Grosse, tried to beat them with an effective vaccine, and above all, easy to produce and administer. Work began with the chloroform-inactivated vaccine, but when injected into the calves, they produced only about 350 doses per animal. In 1943, to produce 100,000 doses, 270 bovids were needed. Virologist Richard Shope, in charge of the Canadian facility, estimated that to protect the North American herd, which then numbered about 60 million animals, it would take 170,000 calves and about 60 years of work at the current rate. Obviously, other solutions had to be found. The vaccine could stop small outbreaks, but not protect all livestock.



Richard Shope

Shope decided to try a different route: grow the virus in bird eggs. Previous experiences with the flu virus had been successful, so that route was explored. He used the Kabete O strain. The process required passing the virus through a suspension of bovine spleen and then passing it through the chorioallantoic membrane of the egg for 8-12 times.

From there it went to the yolk. At that point, the virus replicated with enormous speed invading the embryo and all the fluids that surround it within 24 hours.This avianised vaccine conferred complete protection within 10 days after administration. And 3-4 doses were obtained per egg. In addition, frozen and vacuum packed, it retained its properties for 15 months. With this vaccine, in 1944, the US was prepared to neutralise a Rinderpest attack by the Japanese.

And the threat was absolutely real. At the forefront of the Japanese effort to infect American cows was the Japanese veterinarian Noboru Kuba. The plan consisted of adding viral preparations to hot air balloons that were built to bomb North American soil (some did hit and one caused the death of 6 people, the only casualties in the American continent from this war). Kuba prepared a mash of infected organs, dried it and obtained 50 grams of highly contagious powder. He did a test with a rocket that after exploding in midair, spread infectious dust around. 10 cows had been placed in the vicinity. The experiment was successful as all 10 cows developed symptoms and died of Rinderpest. The project arrived at Unit 731 (known after the war for its many atrocious experiments, mutilations, tests with the bubonic plague, etc.) with the idea of producing 20 tons of infective powder. The idea reached General Tojo who, although retired, still had an important influence on military decisions. Tojo was convinced that if rinderpest plan succeeded, the Americans would wipe out the rice crop, driving hunger to the heart of the Japanese empire. The plan was aborted.



Japanese war balloon

After the end of the war, the nations collaborated again to end the plague as it continued to rage. Thus, the Chinese herd lost 200,000-300,000 heads each year due to the infection, which condemned many farmers – children included – to pull the ploughs to get some grain from the land. Starting in 1947, millions of egg vaccine doses arrived from Canada.

A network of local laboratories was established to produce the vaccine on site. Unfortunately, it was impossible to multiply the virus in eggs, the goat vaccine produced too severe symptoms in Asian cattle so, finally, the lapinised vaccine was chosen. Each rabbit provided between 300-600 doses, was easy to transport and to replicate.

The lagomorph was injected and 3-6 days later it could be sacrificed to procure more vaccines. The program was an absolute success and the last Rinderpest case was declared in China in 1955. At the international level, nations joined forces (with notable exceptions) to fight hunger.

Thus in 1945 the FAO was created, an agency dependent on the UN created for this purpose. FAO took responsibility (in collaboration with the OIE) to help the poorest countries. Provide resources, but above all technical collaboration to eliminate rinderpest. Their performance was key to addressing joint prevention programs, providing vaccines, developing new versions of them, and validating the results once the campaigns had been implemented.



FAO and OIE worked together to control cattle plague

Thailand had carried out many vaccination campaigns but was repeatedly re-infected due to cattle smuggling from neighbouring Cambodia. These situations underscored the need for an international effort. With assistance from FAO, Thai technicians developed a lapin vaccine that was adapted to pigs. Much more abundant than rabbits in the region and with a higher yield since up to 800 doses were obtained from each animal.

In 1957, the greatest success, according to the then FAO Secretary-General, was the practical eradication of the disease in Asia and its control, although much remained to be done in Africa.

The 1960s gave another great boost to the fight against the disease. British veterinarian Walter Plouwright was able to reproduce the virus in cow kidney cell cultures. This finding made it possible to dispense with live animals or eggs to keep the virus alive in a laboratory. The new TCRV (Tissue Culture Rinderpest Vaccine) vaccine was safe for all species of livestock, of all ages, conferred lifelong protection, and was cheap and easy to produce.



Walter Ploughwright

The only downside is that it needed to be refrigerated. This point was not minor, since reaching remote areas, in Africa, often zones of armed conflict, was not easy. But as this vaccine did not cause the disease or

casualties, the farmers allowed the vaccination of their animals without reluctance.

The immunization and control of this virus had two factors that facilitated its success. It was fortunate that the characteristics of the virus helped control it, namely:

- The virus has 3 lineages: Asian and African I and II. Immunity against one viral strain conferred protection against all the others, allowing the same vaccine to be used in different areas of the world.
- The reproductive rate (R_0) of the virus (the number of animals that an animal carrying the virus can infect) is relatively low. It ranges from 1.5 (lineage II) to 4.6 in Sudan (lineage I). To determine the minimum herd immunity, it is calculated with this formula 1-(1 / R_0), which gives a herd immunity requirement ranging from 33 to 78%. In fact, the disease was eradicated from the Somalian region with herd immunity never exceeding 50%.

To give a different example, measles virus has an R_0 of 18, therefore it requires a very high immunidation rate, over 95% of the population to be effective.



Jeffrey C. Mariner

Starting in 1987, FAO established a surveillance program in which, after two years of no cases, the countries stopped vaccinating. It was the only way to verify that the virus was not active since the serology did not distinguish the animals that had antibodies due to the vaccine or to natural infection. If there were no clinical cases in two years after the vaccine was discontinued, FAO determined that the country was free of rinderpest. Also, towards the end of the 80s another twist came to corner the plague: the veterinarian Jeffrey C. Mariner, together with scientists from the Plum Island research centre in NY, after passing the virus through Vero cells (from African green monkey kidney), got a thermostable vaccine, that is, it did not need refrigeration for 30 days. The TRV or ThermoVax.

The shepherds, ranchers, nomads, veterinarians, authorities, all absolutely all collaborated to vaccinate the animals. New diagnoses also allowed a simple swab applied to one eye to determine in 10 minutes whether or not an animal had antibodies.

Like dominoes, countries were receiving plague-free status: India in 2004, Pakistan in 2007, Ethiopia in 2008, Somalia in 2010. So, it was on May 25, 2011, when the OIE declared all countries free and rinderpest was declared the second disease ever eradicated from planet Earth after smallpox in 1980. A month later the FAO would ratify the OIE declaration.

The efforts to achieve this eradication had an approximate cost of $ 610 million. The benefit is incalculable: millions of people who can escape hunger, avoid suffering and death of millions of animals, the protection of wildlife from a threat that caused countless deaths, in addition to the many learnings obtained to mitigate the impact of other animals and human diseases as well. Both FAO and OIE have passed resolutions for member countries to destroy their stocks of plague virus that are still stored in various laboratories. 24 countries still have viable virus. The risks are enormous, in case of escape millions of cattle would die, the wild fauna would be in danger, the cost of eradication would be exponential, the paralysis of the cattle trade would slow down livestock development, there would be a certain risk of lack of food, millions of small producers would see their existence and viability compromised.



Furthermore, there is no objective need to maintain virus samples. If a new epidemic were to appear today, it would be possible to gather the genetic information of the virus that is available at GenBank, a genetic database that contains the complete sequences of the Nakamura III and Kabete O strains in case it becomes necessary to develop vaccines again.

Today we can celebrate an event like few others in history: the elimination of a virus that caused unimaginable suffering. Thanks to science, today it is part of the past. A few scientists, with very limited resources, defeated rinderpest. It is only fair that their feat is known and recognised as it deserves.

I hope this article has served that purpose.



Abdominal Pain & Pyrexia in a Cairn Terrier

Ariadna Ribas Latre, DVM, DECVIM, MRCVS, Dick White Referrals, Six Mile Bottom, Cambridgeshire

(From: Clinician's Brief, August 2020. Reprinted with permission)

Ruby, a 3-year-old, 7.1-kg spayed cairn terrier, was presented for a 24- to 36-hour history of hyporexia and abdominal pain. She had no previous medical conditions, vaccinations and flea and tick preventives were up to date. Initial assessment revealed pyrexia (rectal temperature, 103.8°F [39.9°C]). She was started on potentiated amoxicillin (20 mg/kg SC) and referred to a specialty clinic for further evaluation.

Physical Examination

On presentation, Ruby was lethargic but alert and responsive. Abdominal pain, pyrexia, and hyporexia were of main concern. Her BCS was 5/9, her rectal temperature was 40.2°C, and she was ≈7% dehydrated. She demonstrated apparent generalised discomfort on abdominal palpation. No peripheral lymphadenopathy was noted, and the rest of the physical examination was unremarkable.

Diagnostics

Differential diagnoses for abdominal pain should include any infectious, inflammatory, or neoplastic disease that affects the abdominal organs; rupture, volvulus, or obstruction of an abdominal organ; and referred pain from other muscular, neurologic, or bony structures.

Differential diagnoses for pyrexia should include drug administration; toxin ingestion; and infectious, inflammatory/immune-mediated, and neoplastic disease. Differential diagnoses for hyporexia are broad and can be related to abdominal pain or pyrexia; however, other causes may include primary GI or systemic disease; local disease affecting structures involved in prehension, mastication, or swallowing (i.e., oral, dental, muscular, bone, neurologic conditions); pain; and behavior.[1] CBC and serum chemistry profile revealed a moderate neutrophilic leukocytosis (23,300/µl; reference interval, 3,000-11,500/µl) without toxic changes.

The remaining CBC and serum chemistry results were within normal limits. C-reactive protein (CRP) levels were also assessed for systemic inflammation, and levels were markedly elevated at 29.4 mg/dl (reference interval, <1).

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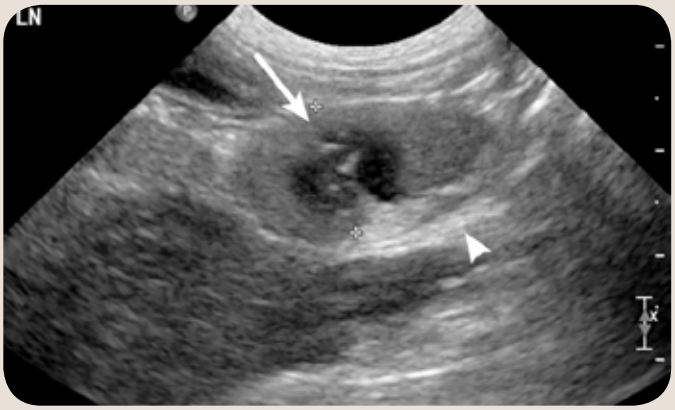


FIGURE 1 Ultrasound image of a jejunal lymph node. A moderately enlarged lymph node with a rounded heterogeneous appearance and ill-defined hypoechoic patches can be seen (arrow). The mesenteric fat around the lymph node was diffusely hyperechoic (arrowhead).

Abdominal ultrasonography revealed the presence of multiple enlarged, heterogeneous, and rounded cranial mesenteric lymph nodes (Figures 1, above, and 2). These findings were suggestive of round cell neoplasia, lymphadenitis (infectious or noninfectious), or reactive lymphadenopathy. There was a small amount of free abdominal fluid, which was sampled and submitted for analysis; this was compatible with a nonseptic suppurative exudate. Culture results of the fluid were negative. Fine-needle aspirates and cytology of the abdominal lymph nodes were consistent with neutrophilic lymphadenitis (Figure 3). No infectious agents were seen. The rest of the abdominal ultrasound was unremarkable.

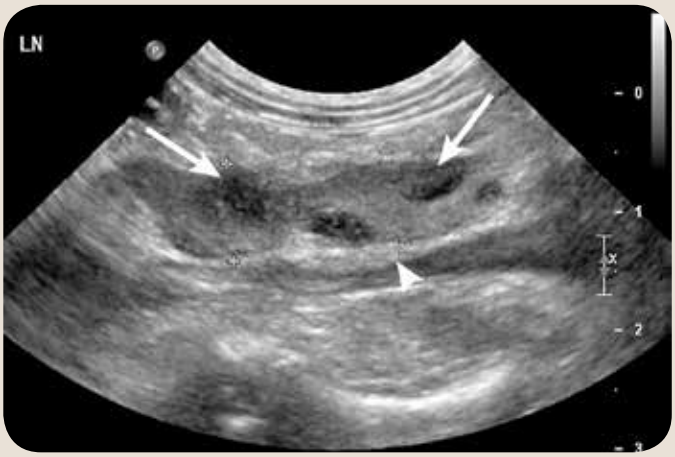


FIGURE 2 Ultrasound image of a jejunal lymph node. A moderately enlarged lymph node with a lobulated heterogeneous appearance and ill-defined hypoechoic patches can be seen (arrows). The mesenteric fat around the lymph node was diffusely hyperechoic (arrowhead).

Differential diagnoses for neutrophilic lymphadenitis include infectious disease, immune-mediated disease, neoplasia, and sterile lymphadenitis.[2] Thoracic radiography was performed to assess for any distant cause of infection, neoplasia, or inflammation, but the results were unremarkable. Urinalysis was unremarkable, urine culture was negative, and serology for arthropod-borne disease (e.g., *Ehrlichia* spp, *Anaplasma* spp, *Borrelia* spp) was negative. Ultrasound-guided trucut biopsies of the abdominal lymph nodes were submitted for histopathology and culture to exclude infectious lymphadenitis. Histopathology confirmed neutrophilic lymphadenitis (Figure 4), and lymph node tissue cultures (bacterial and fungal) were negative.

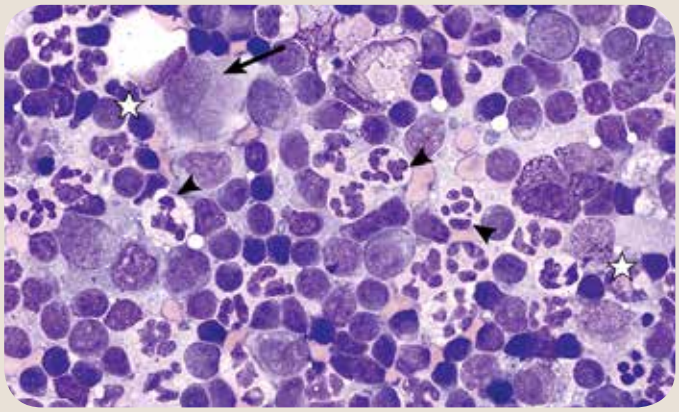


FIGURE 3 Cytology of a fine-needle aspirate from a jejunal lymph node revealing large numbers of variably degenerate neutrophils (arrowheads). No bacteria were observed. Small numbers of macrophages (arrow) and small and medium lymphocytes (stars) were present. These changes are compatible with neutrophilic lymphadenitis. Magnification 100×

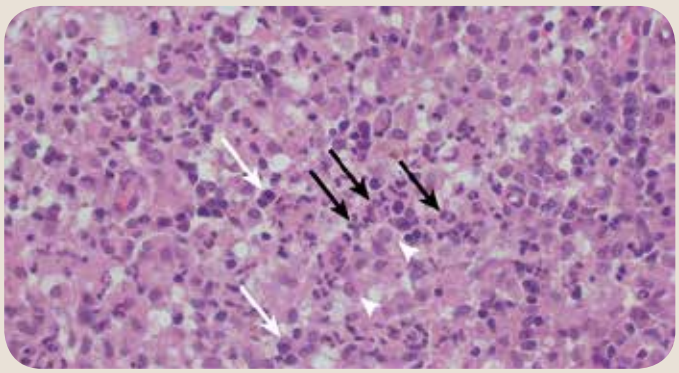


FIGURE 4 Hematoxylin and eosin stained histologic image of a trucut biopsy from a jejunal lymph node. Normal lymph node architecture was effaced by the presence of sheets of degenerate neutrophils (black arrows) and smaller numbers of macrophages (arrowheads) and plasma cells (white arrows). Magnification 40×

DIAGNOSIS: STERILE STEROID-RESPONSIVE NEUTROPHILIC LYMPHADENITIS

Treatment

Ruby was initially treated with IV crystalloid fluid therapy for dehydration and opioid pain relief (methadone at 0.2 mg/kg every 4 hours) for abdominal discomfort. Antibiotic therapy with potentiated amoxicillin was continued. Because an infectious cause was not found, treatment with glucocorticoids was started (prednisolone at 1.5 mg/kg every 24 hours). Ruby remained normothermic 48 hours after treatment was initiated; she had a good appetite and there was no evidence of abdominal pain. She was discharged, and treatment with glucocorticoids was continued. Recheck examinations were scheduled to occur every 3 to 4 weeks. Ruby remained clinically well, and her CRP levels normalised (0.4 mg/dl; reference interval, <1). Repeat CBC also revealed resolution

of the inflammatory leukogram. Glucocorticoid treatment was gradually decreased by 25% to 30% every 3 to 4 weeks, on condition that clinical signs remained resolved and physical examination was normal. Abdominal ultrasonography was performed 1 month after initial diagnosis, revealing resolution of the mesenteric lymphadenopathy.

Treatment at a Glance

- Glucocorticoid treatment can be started after infectious causes have been excluded.
- Most patients seem to respond to glucocorticoid therapy, and rapid resolution of clinical signs is associated with resolution of lymphadenopathy.
- Immunosuppressive glucocorticoids are often necessary to control clinical signs.
- Other immunosuppressive medications may be needed if patient response is suboptimal or steroid adverse effects are severe.

Prognosis & Outcome

Treatment with glucocorticoids was discontinued ≈4 months after diagnosis because the patient remained clinically well. Ruby remained healthy without treatment 2.5 years after initial presentation.

Discussion

Sterile steroid-responsive lymphadenitis (SSRL) is not well-characterised in dogs; however, it should be considered in dogs with pyrexia of unknown origin and inflammatory lymphadenopathy for which no underlying cause can be found. There is little information available about SSRL. Two retrospective, multicentric studies discussed this condition (including clinical signs, diagnostic approach, and treatment) in different breeds,[3] particularly in English springer spaniels.[4] Other case reports/series have also reported on SSRL, especially in English springer spaniels with or without concurrent dermatologic signs.[5-8] A diagnosis of SSRL can be determined via cytology and/or histopathology by documenting an inflammatory infiltrate in lymph nodes without evidence of infectious agents or other underlying disease. It is key that infectious causes be excluded before SSRL is diagnosed; geographic variations are important considerations in these cases, as prevalence of infectious disease can vary depending on the region or country. Good clinical response is initially seen in most patients after glucocorticoid initiation, but other immunosuppressants can be considered if patient response is suboptimal or steroid adverse effects are severe. Relapses are possible after discontinuation of therapy, so monitoring may be necessary.[3,4] CRP evaluation has been used as a monitoring technique. Young female dogs, particularly English springer spaniels, seem to be predisposed to lymphadenitis.[3,4] Previous reports of lymphadenitis in English springer spaniels included a case of sterile neutrophilic-macrophagic lymphadenitis associated with nodular panniculitis,[6] granulomatous necrotising lymphadenitis,[7] and mineral-associated lymphadenopathy.[8]

SSRL should be on the differential diagnosis list for young adult dogs presented with pyrexia and lymphadenopathy.

Take-Home Messages

- SSRL should be considered in dogs that have pyrexia and variable degrees of lymphadenopathy.
- Clinical signs can vary.
- Definitive diagnosis of SSRL involves extensive investigation to rule out detectable underlying infectious, inflammatory, or neoplastic causes.
- Lymphadenopathy can be external, internal, or both.
- Young female dogs, particularly English springer spaniels, seem to be predisposed.[3,4]
- CRP can be used for monitoring purposes.
- Relapses are possible.

CRP = C-reactive protein, SSRL = Sterile steroid-responsive lymphadenitis

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Thank you note from HAWS on 19 May 2021



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In Memoriam

Eulogy: Spencer B Friedman



Spencer Friedman passed away in San Diego, California on 20th May 2021 after a short illness. He was 88 years old and had lost his wife, Ivy in October 2019 after 58 years of marriage. Spencer graduated in 1956 in the same class as Gavin Thompson, Anton Lubbe, Peter Davies, Izzie Bacher and Chris Marlow. When I was a young child, I met Spencer at his one-man practice in Florida Hills. When he, Brian Shaw and Arthur Simon formed a partnership and started the Florida Veterinary Hospital on Ontdekkers Road, I spent every possible moment helping out at the hospital. Spencer was a fantastic mentor to me and even after he and his family left South Africa for Israel and then USA, we corresponded regularly.

Spencer was one of the first veterinarians to perform spinal surgery on dogs in South Africa. He presented his surgical approach and results at the 3rd Annual Congress of the SAVA, Witwatersrand Branch on 9th June 1972 and then at other congresses and meetings. He published "The Surgical Approach to Canine Intervertebral Disc Disease" JSAVA 44(4): 421-431 in 1973.

During his retirement, Spencer remained active and fit by walking his dogs, riding his bike, swimming and corresponding with family and friends all over the world. He will be sorely missed by all these people but especially his children Cliff, Janet, Brad, Roger and grandchildren.

Ken Pettey

In Memoriam

Eulogy: Professor Courtney Martin ('Tubby') Veary (21/09/1939 – 12/06/2021)

Courtney Martin Veary, (better known as 'Tubby'), was a major contributor to meat hygiene and veterinary public health in South Africa and a leader in veterinary science. He was born in Johannesburg and as a schoolboy at St John's College, Tubby was very active in sports and won full colours. At Tukkies, he played for the first hockey team while completing his veterinary degree. After qualifying he joined Harlequin Club's Old Croconians and represented Northern Transvaal Masters Hockey as goalkeeper. Hockey remained his chosen sport for most of his life and he was still playing goalie in his sixties (playing his last game for Masters Hockey a month before he turned 70). Tubby thrived on people contact and was a people's person. In addition to being an excellent sportsman, he applied these skills within our profession in terms of commitment and leadership. He was a team player at all times and never stepped back from any challenge.

Tubby Veary qualified BVSc in 1963 and married Annette soon after. They had two children – a son Iain and daughter ElsBeth – sadly, ElsBeth died of cancer a few years ago. Annette died in May 1996, and after being supported by a wonderful lady for nearly 20 years, Tubby remarried four years ago and Ena has been his true comfort and protector during his recent sad decline in health.

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Ena dealt with some of the hardest times in his life. We salute Tubby, a giant in our profession and thank Ena sincerely for her dedication to our colleague and his family.

In 1964, Tubby joined a small animal practice belonging to Dr Wally Leibenguth in Johannesburg and spent several years in this practice before moving to the practice of Amos and Clow in Durban. In 1969, Annette suffered a stroke and as a result Tubby made a career change that would allow him to assist in caring for her. He left private practice and joined the Durban Corporation where he became the principle veterinary meat hygiene officer at the Durban Abattoir. Later, as state veterinarian and regional neat hygiene officer while the new abattoir was built at Cato Ridge, he was responsible for establishing this new abattoir. There were significant problems for more than six months, requiring that he and his co-workers spend substantial amounts of time until late at night to fulfil the daily requirements. He followed his BVSc with a Diploma in Veterinary Public Health and later obtained his MMed Vet (Hyg). Tubby devoted himself to ensuring that proper procedures were followed, and he developed a specialist expertise base which has served our profession for many years, including having written the standard lecture notes in meat hygiene for all students at Onderstepoort. His collection of photographs of meat inspection form a significant part of the history of the Onderstepoort Veterinary Faculty.

He was one of the first to make a commitment to public health, with a strong focus on meat hygiene in all sectors. He improved abattoir grading and initiated a system of inspection. His actions made him a leader in the promotion of livestock welfare, specifically at abattoirs. He was a research leader in the field of meat hygiene and his publications have been extensively cited. His research grading on Research Gate was extremely high and he was linked internationally with scientists globally.

At the Onderstepoort Veterinary Faculty he became full professor and head of the Department of Veterinary Public Health, and later head of the Department of Animal and Community health in 1997. He made contributions in wildlife farming and harvesting for exports with the Red Meat Abattoir Association. Among his important achievements was the introduction of hazard analysis critical control points (HACCP) and abattoir grading and inspection. His dedication and attention to detail facilitated the formulation and rewriting of meat hygiene legislation in South Africa, which enabled the country to export internationally and contributed to the national economy.

In addition to his major achievements as an academic and researcher, Tubby was very committed to the veterinary profession. He was involved in the South African Veterinary Association, the SA Veterinary Foundation and the SA Veterinary Council. Tubby was president of SAVA from 1984 to 1986 after fulfilling numerous positions as vice chairman and then chairman of the Natal branch, later the Pretoria branch; he was a member of Wits branch, and chairman of the education committee and constitution committee.

He received the Boswell Award in 1987, was elected Honorary Life Vice-President in 1988, was awarded the Silver Medal in 1990, and received numerous citations. During the time when Tubby was vice president together with Peter Belonje (president), SAVA bought the house that is now Vet House. Tubby Veary was a popular person in any forum, including the Whirling Wheels Paraplegic Club, the Rotary Club, and the Umhlanga Rocks Town Council and Ratepayers Association.

May his soul rest in peace after his labour of love.

Glynn Catton
June 2021





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In Memoriam

Eulogy Sr Theresa Lotter (05 Feb 1970 – 07 June 2021)



Regretfully the Covid-19 pandemic has claimed yet another valued member of our profession. Moreover, it claimed a loving mother, wife, sister, friend and colleague. From the onset in her professional life it was clear that she was destined to become remarkable and a cut above the rest. She had an innate quest for excellence, perfection, order and direction. This quest steered her on a path that meandered through all the disciplines of our profession. Her contributions were vast. She left intelligible marks in private practice, education, nurses association, veterinary council, animal welfare, ethics, research facilities and other regulatory bodies. Through following this full and busy life, she had morphed herself into a formidable asset to her colleagues and the profession. Theresa valued her independence. I take solace knowing that she spent the last years of her professional life doing what she loved most, creating order where there is none, providing guidance when it was most needed and being part of solutions for challenges faced by others. Her undeniable competence and wide set of skills were recognised by many and opened a myriad of doors to do what she loved most, to serve. Inevitably, at various points in her life, she was placed in positions of authority. She held these positions respectfully and with an empathy that compelled her to always choose a remedial approach above a punitive one. To her many peers she was a solid pillar of support and wise guidance. To the less experienced she was a mentor and great teacher. She will be sorely missed by all that were fortunate enough to have crossed her many paths. One of her most outstanding qualities was that she observed a sacrificing narrative leading her to serve rather than **earn**.

Theresa, you have **earned** the utmost accolade in our profession as one of our greatest ambassadors!

Kurt De Cramer



Phosphorus and Feline CKD

Dr Angeliki Kaldelis BSC, BVSC, RCVS

Chronic kidney disease (CKD) has a very high prevalence in cats, with 33% of cats over the age of 12 years being affected[1] and is one of the most common medical reasons older cats are seen in veterinary practice[2]. In CKD, as kidney function deteriorates, the homeostatic mechanisms struggle to regulate fluid, electrolyte and mineral balances, and eventually clinical signs of uraemia occur[2].

Phosphorus is a mineral essential for life, with 86% of the body's phosphorus retained in bones. It is also a constituent of cell membranes, DNA, RNA, and ATP (an essential part of energy systems).[3] Phosphate is freely filtered by the normal kidney but not actively secreted by the tubule, thus daily phosphate excretion from the body is highly dependent on the glomerular filtration rate (GFR). As the GFR decreases (such as in CKD), and if the dietary phosphorus intake remains the same, phosphorus will start to accumulate in the body. This rise in phosphate concentration in the body triggers an increased synthesis & secretion of parathyroid hormone (PTH). PTH reduces phosphate reabsorption in the tubule, thus increasing the amount of phosphate excreted in the urine. This adaptive response is initially helpful, as it helps maintain phosphate (and calcium) homeostasis. However, as CKD progresses and fewer functioning nephrons remain, secretion of PTH (driven by phosphate retention) becomes counterproductive and so mal-adaptive[2], with chronic high levels of PTH leading to bone demineralisation (renal osteodystrophy). Additionally, phosphorus (and calcium) is deposited in the soft tissues, leading to mineralisation, which is thought to contribute to progressive renal injury (through nephrocalcinosis) and to the extra-renal (particularly cardiovascular) effects of secondary renal hyperparathyroidism (SRHP)[2,4]. Hyperphosphatemia in CKD is associated with decreased survival time in cats with naturally occurring CKD, and plasma phosphorus has been documented to be an independent predictor for progression of feline CKD[4].

There is evidence that feeding a phosphate restrictive veterinary renal failure diet reduces both plasma PTH and plasma phosphate concentration in cats with naturally occurring CKD (and thus reduces SRHP). In cats with CRF, plasma phosphate concentrations will vary due to a number of factors: dietary phosphate intake, circulating PTH concentrations, and the remaining ability of the kidney to excrete phosphate. It is thus apparent, from a clinical perspective, that the degree of phosphorus restriction required must be tailored to each individual cat[5]. This can be achieved by using a combination of diet (Royal Canin Early Renal vs Renal) and phosphate binders, with the degree of dietary phosphate restriction required to attain ideal post treatment plasma phosphate concentrations increasing with the severity of kidney disease.[2]

Classifying a feline patient diagnosed with CKD according to the IRIS staging system is useful to facilitate appropriate treatment and patient monitoring. Included are recommendations regarding control of plasma phosphate concentration according to the stage being treated, as can be seen in table 1.

	Stage 1 (No azotaemia)	Stage 2 (Mild azotaemia)	Stage 3 (Moderate azotaemia)	Stage 4 (Severe azotaemia)
Post-treatment plasma P concentration	<1.5 mmol/l	<1.5 mmol/l	<1.6 mmol/l	<1.9 mmol/l

It must be noted, that while adverse effects of restricting phosphate are rare, it is recommended that plasma phosphate and calcium are measured routinely every 2 – 3 months in cats that have been stabilised on restricted phosphate diets[2]. This will assist in detecting potential hypophosphatemia, as well as hypercalcemia (which has been reported on occasion[6]). The underlying cause of hypercalcemia in these cases is not understood, but it appears to result from phosphate restriction since feeding more phosphate in the diet leads to the plasma calcium ion concentration returning to within a normal range, and the plasma PTH concentration increasing into the measurable range. Since PTH is important for normal bone turnover, it is recommended to rather increase dietary phosphate levels than completely suppress PTH secretion.[2] This small proportion of cases further highlights the fact that different levels of phosphate restriction are needed in different cases, and that diet and treatment should be tailored according to the individual need of each cat with CKD.

**References available on request*



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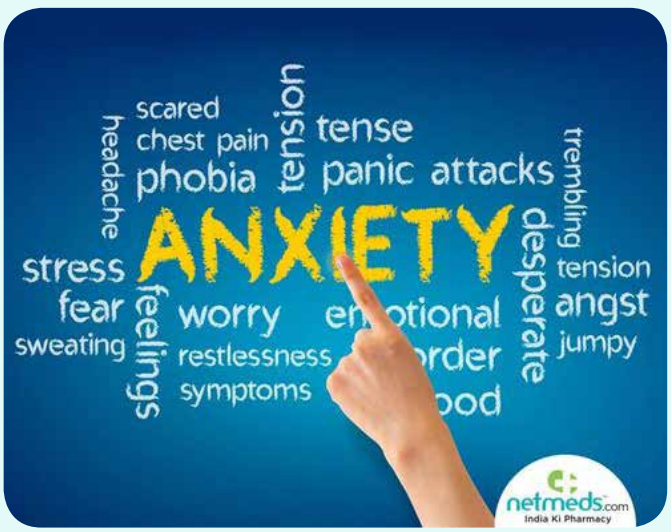
TROUBLING TIMES & ANXIETY



Dr Mats Abatzidis

B.Sc. B.V.Sc.

New Insights Certified VIP Life Coach
mats.abatzidis@yahoo.co.za
Founder of Influential Life Coaching
http://www.matsaba.wix.com/drmatscoach
Author of the published book "Life outside your comfort zone. Better and beyond all expectations".
http://www.amazon.com/s/ref=nb_sb_noss?url=search-alias%3Ddigital-text&field-keywords=Abatzidis
Blog: https://drmatslifecoaching.wordpress.com/
http://www.life-coach-directory.co.za/mats-abatzidis



I hope this article of my column finds you and your families well and safe!!! With everyone working hard to make up for lost time and perhaps make up the deficit that we have all endured over the past year and a half, we have had yet even more bad news over the past couple of weeks which has created a significant amount of anxiety, stress and fear. **There is nothing wrong with anxiety.**

Human nature is such that we want to receive the thing we are waiting for as quickly as possible, or more appropriately currently, we want to drive away whatever is causing our fear.

It is difficult to our family, friends, and colleagues not to worry when they have invested their money, time and effort into dreams that have not materialised yet or seem like they may very well not materialise at all. We feel anxiety because we love.

The farmer needs to wait for the seasons to change before he/she can harvest his/her crop, but the wait is still an impatient one.

We are the warriors that have trained to the point of exhaustion, given of our best and although we have prepared ourselves, we still have fears about losing everything and having all our efforts proving to be in vain.

Anxiety is part of our humanity, which means that despite knowing that we will never be able to control it, **we must learn to live with it.** Perhaps, this sounds negative to some, but a simple example is the fact that we have learned to live with many things that make us anxious. We live with storms, the sound of sirens and gunshots in the distance, as well as the constant bad news on the TV.

The consequences of not being able to live with anxiety are that life becomes a nightmare, every hour and very day becomes a curse. We wish our lives away by wanting time to pass faster until our last day. In addition, our anxiety attracts more anxiety and we do things that adds to the emotion. For example, a parent waiting for his/her child to come home may start imagining the worst when the child is running later and later.

The spouse who doesn't answer calls, responds late, and fails to answer questions can turn anxiety into mistrust and despair. We listen to rumours and complain about long days. Some of us have been seen to be aggressive with friends, family, and employees. Eating badly (too much down/out) and battling to sleep peacefully.

We lose our enthusiasm for our work and we become obsessed with it, often leading to overworking at the expense of our family and friends. Colleagues and clients may see it as determination and drive, and you accept the compliment. I have seen this excessive work lead to divorces and damaged parent-child relationships.

"Anxiety is like a rocking chair. It gives you something to do,

but it doesn't get you very far." – Jodi Picoult

What are the **strategies** that we can employ **to help us control our anxiety**?

1. **Focusing on the present** moment is very helpful. Having faith in that tomorrow will come when it is the right time, but for now we need to experience what is around us without worry for what lies beyond us. There are many things that are beyond our control and we cannot devote unnecessary energy to them.

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2. Taking on too many tasks may seem like you are being productive, but it is just as important to **take time out** to enjoy your family, "smell the roses", take care of your body, look at the stars and rest your mind. That will allow you to remain inspired and function better.

3. Organise your mealtimes and foods made available to you, so that you develop **good eating habits** and strengthen your body when appropriate. My father used to tell me – "eat to be able to live; do not live to eat". Many a time, what we suspect is hunger may be thirst, and so hydration should be maintained and is just as an important component of sustenance.

4. Take time to listen and **appreciate** all the little things of **your beloved spouse.** Appreciate their work and their attributes that first impressed you and focus on the present moment. Focus on the reasons to be happy in each other's company and offer each other that which is needed. Watch over each other and enjoy each other.

5. Lavish your children with genuine attention and **never be afraid or over-cautious about your parenting**. Excessive caution and second-guessing ourselves as parents have a way of destroying our soul and our heart. It is better to see living, especially in these current, unprecedented times as an act of courage, and an act of **courage is always an act of love**.

Anxiety will never disappear but understanding that is part of our human nature gives us the wisdom and the realization that **we can be the masters of things that try to enslave us**.

Next month, we will learn more ways to embrace the new world post COVID19, healthy and safe.

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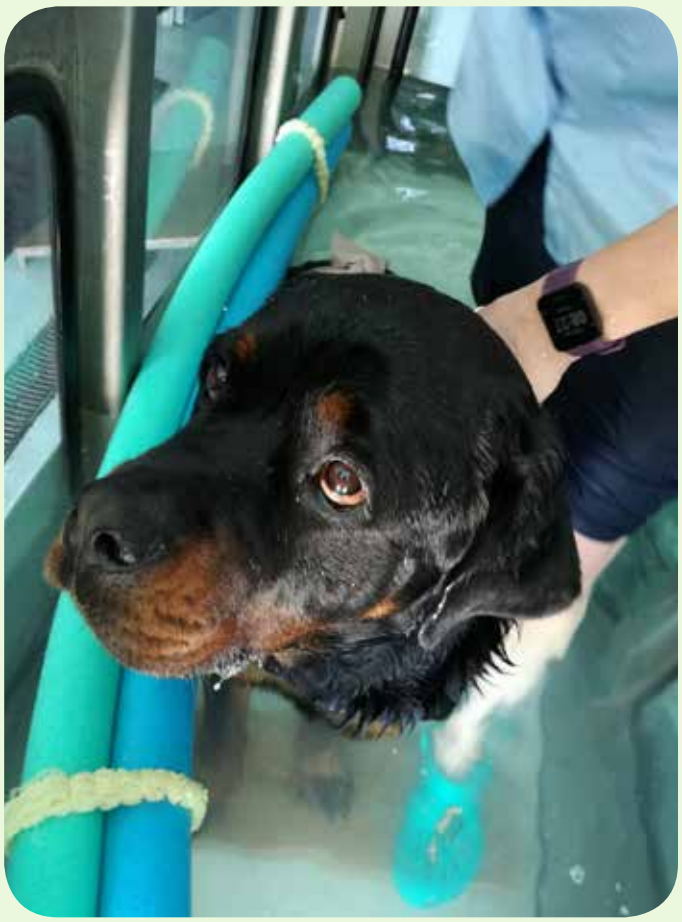
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Wobbler's Expectations

Tanya Grantham



The condition referred to as Wobbler's has many names. Wobbler's Syndrome in large and giant breed dogs is easy for the pet parents to remember because it is very descriptive. The dogs diagnosed with this condition 'wobble' when they walk – most often in the back legs. The veterinary terms vary, the most common being cervical spondylomyelopathy, cervical vertebral malarticulation-malformation and cervical vertebral instability.

The problem most often occurs in the vertebrae of the neck. The bones themselves are malformed. Depending on the degree of bony abnormality an instability is created between the two vertebrae. More than two can also be affected. The instability results in further changes to the facet joints and the supporting ligaments. These alterations can cause compression of the spinal cord and there may be nerve root involvement. In older dogs the persistent instability can, and does, contribute to disc degeneration. A degenerate disc is unable to adequately absorb shock and becomes susceptible to herniation.

The end result is an impedance of nerve impulses from brain to limbs, and vice versa. This disruption of messages causes the characteristic "wobble", or ataxic gait seen in affected individuals. The condition is also painful.

The choice of treatment is often surgical, aimed at relieving the pressure placed on the spine and if possible, stabilisation of the vertebrae. Over the last 12 years AHAH has been involved with the rehabilitation and management of dogs with this diagnosis that have been treated both surgically and conservatively. This has enabled us to formulate some sort of idea of expectations regarding recovery and the possibility of the dog living a relatively normal life. The dogs can be divided into two groups based on the symptomatology; those that are unable to walk or balance with or without severe pain, and those dogs that present with milder symptoms of ataxia and controllable pain.

Severely Affected Dogs

Many of these dogs struggle to move, rise from a sitting or lying position, and exhibit pain which does not respond well to medications. They frequently fall over which can worsen the pain because they are unable to brace themselves when they lose their balance. These dogs require surgery. After surgery the dogs may be quadriplegic. As we are working with dogs that weigh between 40 and 65 kilograms this can present a huge logistical problem when the dog is discharged from hospital. Physical rehabilitation practitioners are able to assist with returning the dog to some form of mobility as quickly as possible.

We also advise on the practical aspects of home management of a large, disabled dog. In most instances the dog's are able to move themselves around after 6 weeks. Further rehabilitation is required beyond that to return the dog to full functions of daily living. Once the dog has returned to functional mobility, there may still be remaining neurological deficits. Our experience is that if not regularly attending therapy (every week or every fortnight) then weakness can develop again fairly rapidly. Those patients that have stayed with our facility have enjoyed full, active lives following their surgery.



Mildly Affected Dogs

Dogs that show mild balance and gait problems, with mild pain that responds to anti-inflammatory medication can enjoy a normal life but certain lifestyle changes should be made. Teach your dog to enjoy being in a crate or in a smaller area that limits movement. It is entirely likely that there will be episodes where the symptoms flare-up. Confinement and medication are crucial to alleviating the symptoms.

Secondly, when exercising the dog do so in a harness as opposed to a collar. Too much pressure exerted on the neck, when using a collar, can intensify the clinical signs. Arrange regular therapy sessions, especially initially, to teach the dog awareness of its limbs, to strengthen the legs and also to activate the core muscles.

Core stability is an essential component in limiting excess movement and dependency on the legs. Many of our patients remain for the duration of their lives because of the benefits of therapy. If, however, this is not possible then a home program can be devised that will attend to the factors mentioned above. It is recommended that an initial therapy program at the rehabilitation facility is attended.

In conclusion, the expectation is that once a dog has been diagnosed with Wobbler's Syndrome then the commitment to health and wellness is lifelong. This will require lifestyle changes and resources (specifically time and money). Dedication on the part of the pet parent results in an active life for their dog, coupled with the enjoyment of your companion's company.











Dental COLUMN

Resorptive lesions

Prof Gerhard Steenkamp

Most of you practicing small animal medicine will have had exposure to resorptive lesions in cats. You will all know this is rather common and very frustrating to treat. It is important to note that the high incidence in cats is rather unique amongst mammals, but it is important to note that they are indeed not the only animals with this problem in their dentition.

Over the past number of years we have seen a number of dogs with similar presentations presenting to our clinic (Figs. 1, 2). As in cats, dogs may be asymptomatic or have varying degrees of oral discomfort and pain when they eat.

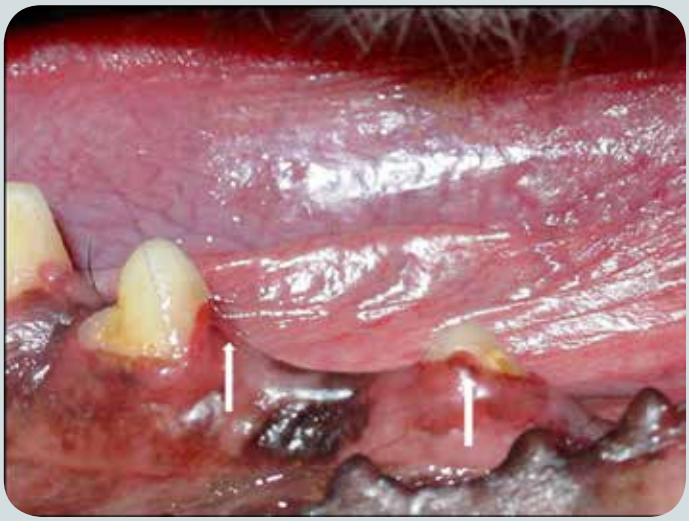


Fig. 1. The mandibular teeth of a dog affected with tooth resorption. The white arrows shows hyperplastic gingiva covering the destroyed sections of the tooth crowns.



Fig. 2. Lingual aspect of the left mandibular molar tooth (white arrow) showing a pink discoloration and some hyperplastic soft tissue covering part of the tooth crown.

Tooth resorption as mentioned is not as common as in cats but when present certainly needs to be addressed in a similar fashion as is done in cats. Firstly oral radiographs are needed in order to quantify the problem. Not all teeth affected with tooth resorption will be discoloured or have hyperplastic gingiva covering them. Secondly you also need to ascertain if ankylosis has occurred between remaining roots and the alveolar bone (Fig. 3).

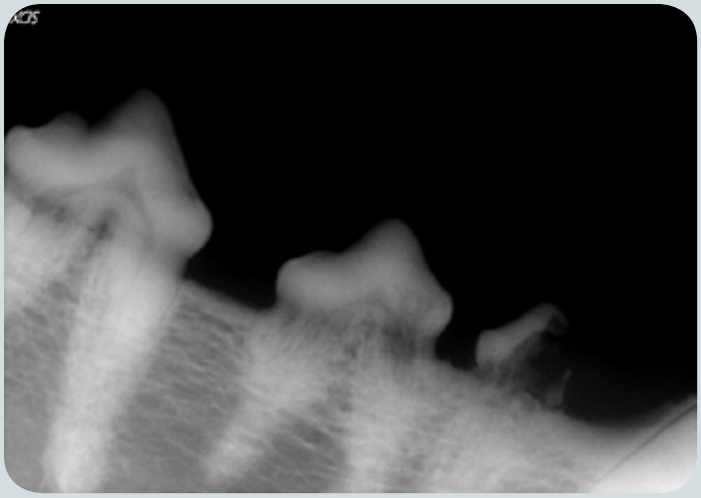


Fig. 3. An intraoral radiograph of the left mandibular premolar teeth 1, 2 and 3. All three of these teeth are affected by tooth resorption and ankylosis to the alveolar bone is evident.

Treatment of teeth affected by tooth resorption consist of either tooth extraction (ideal, but only possible if there is no ankylosis) or crown amputation (in the absence of any perio-or endodontitis) (Fig. 4). Crown amputated teeth should ideally be re-evaluated with radiographs during follow-up dental procedures.

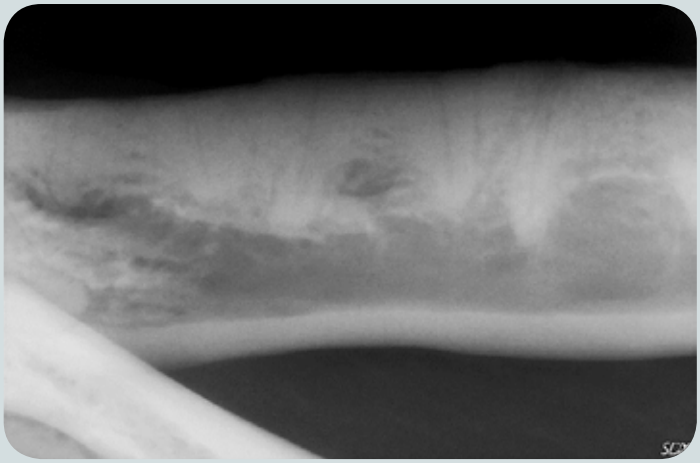


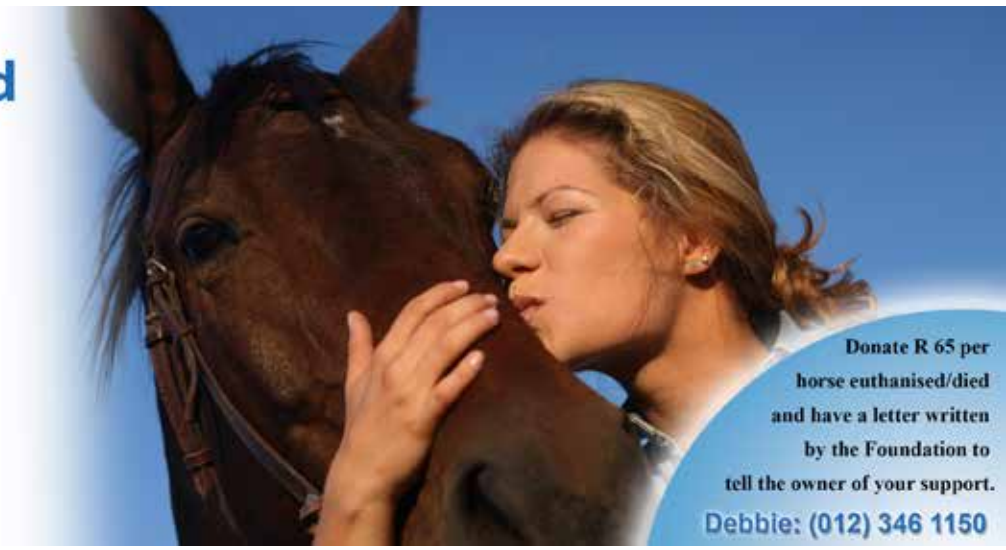
Fig. 4. A follow-up intra-oral radiograph of a dog previously treated with crown amputations. The root remnants does not appear to have any infection associated with them.

Crown amputations are done after the creation of an enveloped flap. This allows adequate access to the affected tooth and amputation is done 1-2 mm below the alveolar ridge. Tooth resorption will continue and as you monitor these patient s radiographically you may, in time, find no sign of root remnants only alveolar bone.

Veterinary Dentistry and Maxillofacial Surgery Referrals
Veterinary Dentistry and Maxillofacial Clinic,
Private Bag X04, Onderstepoort, 0110
Veterinary Dentistry and Maxillofacial Clinic, Onderstepoort Veterinary Academic Hospital, Faculty of Veterinary Science, University of Pretoria,
Old Soutpan Road (M35), Onderstepoort, South Africa

Tel: +27 (0)12 529 8276, Fax: +27 (0) 12 529 8479,
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Zoetis Animal Health Pages

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Influence of Nutrition on the Immune System of Ruminants

Schabort Froneman

A functional immune system is necessary to sustain life and the immune system of a ruminant enables it to remain healthy and productive in its natural (non-sterile) environment. The immune system does not consist of thin air or magic spells but needs proverbial bricks to build its defences and these bricks are provided by ingested nutrients. Without proper nutrition the immune defences will weaken and may even crumble, resulting in animals that do not respond to vaccination and are overcome by disease.

The immune system of ruminants is classified as "specific" and "non-specific". Non-specific immunity (or innate immunity) is *not pathogen-driven* and are composed of mechanical barriers and blood-derived cellular components, including the complement cascade and phagocytes. The innate immune response is the first line of defence and acts within 0 – 4 hours after exposure to an antigen.

Specific immunity (or acquired immunity) *is pathogen-driven* and mounts a targeted immune response that is antigen-specific. Its categorised in two parts, namely *humoral immunity* (B-cells producing antibodies) and *cell-mediated immunity* (cytotoxic T-cells that eliminate infected body cells).

Every part of the ruminant immune system described above, requires nutrient inputs to function.

In metabolic physiology, the nutrient requirements of the immune system are included in daily recommended maintenance requirements. It is important to note that during periods of physiological stress (or pathogen challenge), animals may have higher-than-normal nutrient requirements.

Similar to high priority tissues, like the brain, the immune system is very effective in extracting nutrients when stimulated. Body condition becomes important when an animal is diseased and voluntary feed intake drops, which is a common result of sickness in ruminants. As the animal mounts an immune response (and sometimes an inflammatory response) there is an increased nutrient need as described above and the drop in feed intake will result in the body mobilising its own resources, such as fat and muscle, to provide the necessary maintenance nutrients (such as energy and protein) as well as the increased nutrients needed to ward off the disease.

Thus, if an animal has a poor body condition and a poor plane of nutrition, it is much less likely to mount an effective immune response to a disease, compared to an animal that is well nourished and in a good body condition.

It is estimated that there is a 10 – 13 % increase in the rate of metabolism, for every degree of fever that the body temperature rises above normal. Production of antibodies and liver proteins also incur an additional energy cost. Disease results in an overall catabolic state and this is the case even in subclinical infections as seen, for example, in feedlot calves with subclinical pneumonia that have decreased weight gain and feed efficiency.

Therefore, most vaccine manufacturers will include a caution in their package insert that indicates that the vaccines should be used in healthy animals for optimal results.

Carbohydrates, protein and lipids are commonly referred to as *macronutrients* and are the three foundational groups of nutrition. Each type of cattle operation has different challenges to optimise the supply of these nutrients.

In the case of a feedlot operation, energy is supplied mainly through carbohydrates such as maize or hominy chop that is fermented via amylolytic bacteria in the rumen to volatile fatty acids. These feedstuffs are energy dense and a typical total mixed ration (TMR) in a feedlot will constitute a very high plane of nutrition.

The challenge in feedlots is to find the sweet spot between supplying enough energy to optimise weight gain, but not too much, which would result in the metabolic stability being compromised.

Immunologically it can have a negative impact to have a TMR with too much or too little carbohydrates, and balance is the key word.

Cow-calf operations generally have very different challenges with regards to macronutrients, compared to feedlots. These systems are often extensive, and the main feed supply of the animals is natural veld or pastures. The main energy source is roughage that is fermented via cellulolytic bacteria in the rumen to volatile fatty acids.

Depending on the area and season, different challenges will arise. For example, in the central highveld the natural pastures are mainly *sourveld* and the challenge is a decline in quality during the dry season.

The challenge in grazing systems is to strategically supply nutrients (such as protein and energy) to ensure the animals maintain a good body condition that would optimise production, reproduction and immunity, while remaining profitable and keeping the nutrient expense to a minimum.

Vitamins and minerals are commonly referred to as *micronutrients* and they play a vital role in the function of a ruminant immune system. The elaboration of the specific immune functions of various vitamins and minerals falls beyond the scope of this article, but a few examples are worth mentioning to demonstrate the important effect of micronutrients on immunity.

Vitamins A, D and E have regulatory functions on the cells of the immune system. Trace minerals play important roles the enzyme reactions of the immune system and vitamin E and selenium are crucial in the antioxidant system.

When supplementing micronutrients, the biggest improvement in immune function is observed when the animal(s) had a deficiency that is corrected. Various factors can play a role in the decision on a supplement program and the measures of correction can range from adding phosphate in a summer lick to a detailed supplement program based on liver biopsy results.

The important concept is that micronutrients play a vital role in the immune system of ruminants and supplementation should be implemented to avoid deficiencies and provide sufficient quantities during periods of stress.

Vaccination is one of the most important tools that producers can utilise to improve herd health and enhance protection against important diseases. Nutrition is one of the most important factors that determines adequate immunisation and implementing a proper nutrition-(and supplementation) program in a livestock enterprise is the foundation upon which herd health is built. V

The author can be contacted for a full list of references.

Dr. Schabort Froneman (BSc, BVSc) | Technical Manager: Ruminants

Zoetis SA (Pty) Ltd

PostNet Suite 53, Private Bag 9976, Sandton, South Africa, 2146

Office : (+27) 011 245 3320

Mobile : (+27) 082 348 2306

Email : schabort.froneman@zoetis.com

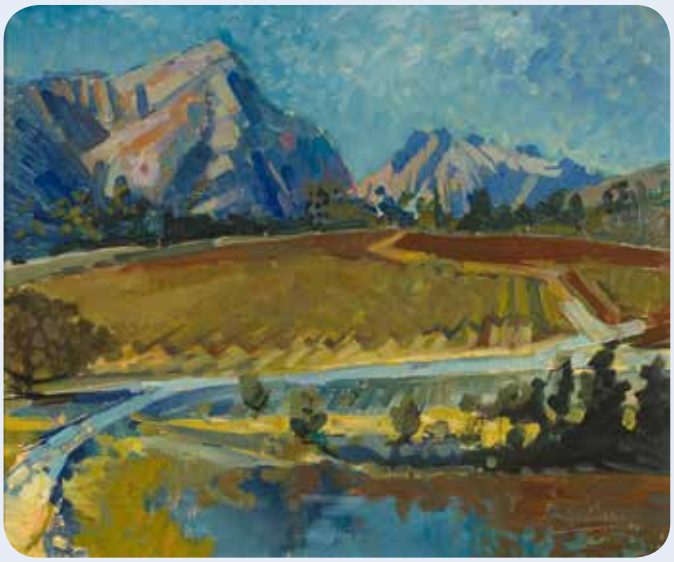
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Recollections 48 - A Momentous Choice

Ian du Toit



Ida's Valley, Stellenbosch – painting by Philip Erskine

I can remember the exact place where I was driving when I made the decision. It was just about one kilometre before our hospital at Ida Minor, as the road entered the suburb of Ida's Valley. I can't remember the date but the place is as clear as a photograph, etched into my mind. For a number of years, since meeting Joseph in the caravan park in Heidelberg, I had been searching and hoping to find the One who Joseph seemed to regard as a "Friend". Time passed and several dead ends, but also considerable progress.

The debate I had been having with myself on that day was something like "what would happen if I decided to make a definite decision to believe in Jesus as being a real figure in history, who had in fact lived and done the amazing things



He has been reported as having done? What would happen if I decide to believe and it turns out to be a totally empty belief when I die one day, what have I stood to lose? On the other hand what if I chose not to believe, and when I die I discover that after all He was and is real, then at that moment of reckoning, I have lost everything. There would be no going back for a second chance". At that point in the road, where I passed a lilac-pink house on the right and a large blue gum tree on the left, I made the choice. I would take a wholehearted decision to believe.

Emily's brother had come to stay with us, after he had a disastrous divorce in Rhodesia (Zimbabwe). He had been completely depleted and crushed and arrived on our doorstep with a large suitcase which he dropped disconsolately on the stoep, with the words "this is all I have left of my life". But he had gained something, he told us later, in his own words he had been "born-again". In the next months while he stayed with us, he spoke to us about his experience and amongst others gave Emily a book called "If you want to walk on the water, you must first get out of the boat".

As I passed that pink house, the name of that book was throbbing in my mind. I pictured myself literally standing up and stepping out of the boat of the life and ideas I had clung to and which had given me security and I stepped onto the water of a new life, a life which I would have to live, trusting in Someone I could not see. Leaving the familiar and "secure" for the unfamiliar, yet possibly the most exciting adventure of my life. A life in which I was entrusting myself completely to Jesus to keep me afloat. A Jesus, who I had only now decided to believe in and trust fully. What would all this hold for me?

Nothing changed, the scenery, the familiar route to the hospital, the regular actions and functions of our veterinary practice continued, as if nothing had changed. Yet although I didn't know it, my whole life had come to a fork in the road and the direction I chose was going to lead me on a path where I would scale the highest mountains and at other times descend into the most difficult valleys. I had taken the road to real life, Life with a capital L. Life where my work would take on a new dimension. Where my experience would be enhanced beyond anything I could ever have imagined. From black and white to full colour, from one dimension to a richly flavoured three dimensions.

Our partnership had been going for about three years and I was feeling really comfortable and part of the whole practice. At that time many of the wine farmers still believed in using real organic compost in their vineyards to get the best grapes and ultimately produce the best wine. To make this compost they would keep a small herd of dairy cows, usually Jerseys, who would spend at least 12 but up to 24 hours in an enclosure where fresh straw was continually added. Although the cows were milked and the milk sold, that was very much a secondary operation. The upshot of this was that I was being called on to do everything veterinary for those cows. The facilities were usually absolutely basic, no crushes and sometimes nowhere for the cows even to be tied up. We even started doing A.I. so that the farmers could continue their operations without the presence of a bull. I was doing TB and CA tests on about 35-40 herds.

Over the years these herds gradually ceased to exist and in their place I found myself servicing 12 – 14 large to mega-herds where I was able to develop my primary interest of doing herd-health consultation. The professional managers loved to do some veterinary work so I would train them to do all the basic veterinary procedures, with the understanding that they know their limits. So the daily routine list of septic mastitis, retained placentas, simple dystocia's, etc. became much less.



Photo: Camphill Village

Many of the farmers also kept draught horses to draw ploughs between the rows of vines, as there was none of the modern machinery, developed specially for this purpose, available yet. Elsenberg Agricultural College had a Percheron stud, which was one of the top studs in the country, where they bred horses for this purpose. Some of these really big chaps could be quite a challenge with their feet. One of the most common conditions they suffered from was lameness which was usually caused by abscesses under the sole especially on the white line, where the sole met the wall of the hoof. Hooves often as big as dinner plates. Persuading a 1 ton horse to lift its foot when it didn't feel like it was more than a challenge. I quickly followed Joep's advice and learned to "drop" these animals with a dose of chloral hydrate, just sufficient to let them lie down long enough to pare open the septic area and dress the hoof.

So there were multiple branches in this "general" practice which made it most enjoyable. Day after day I would ride out with a song in my heart of thankfulness that I had chosen this profession and been offered this superb chance to practice in such a beautiful and diverse area.

As I look out of my window today, I can see the hills of Vlottenburg in the distance and I'm reminded of a late winter's afternoon where the weak and watery sun was trying to push its way through the thin layer of clouds trapping the layer of cold air close to the ground. I couldn't believe what I was seeing. The call had come with a sense of real urgency and as I rode rapidly into the farm-yard I could see a worker holding the large black Percheron standing at the entrance of the vineyards. Hanging from his chest there was a flap of skin, the size of a newspaper. He had been spooked and taken off into the vineyard where he had run flat out into an iron fence-pole. I was very relieved that the wound was so fresh as I put in the last stitches sometime later in the rapidly developing twilight, with the help of the feeble light of a lantern. The wound healed by first intention, but the picture has stayed with me ever since.

In the meantime, a new opportunity had arisen for Emily and I. we were invited to participate in a course run by "Lifeline" to train telephone counsellors. The course consisted of three modules and little did we know what effect our participation would have on our lives from then on. The first module consisted of 12 weekly sessions and was aimed at helping each participant to come to terms with who they are. The process was aimed at enabling us deal with our own 'hang-ups' and all our underlying baggage, so that when we were ready to train as counsellors there would be nothing impeding our ability to counsel the clients who would be phoning in.

The course consisted of 12 weekly sessions of between two-three hours each. We were divided up into groups of eight people per group and we were given interactive exercises to do which literally turned us inside out emotionally and left us physically exhausted at the end of each session. Spouses were separated so that each one could be completely open with his/her group. We were also given quite a lot of reading to do between sessions. There was very little 'formal' teaching or lecturing. I regard this experience as one of the highlights of my life. Emily and I opted not to do the next module, which consisted of actual training in counselling, because of time constraints. The last module was to be on the job experiential training answering telephone calls.

On the Sunday after the last session, I was driving with Emily to attend a church service, by invitation in Somerset West, when I became aware that Emily was sobbing gently. I pulled off the road and taking her hand I asked her what was the matter. Between her sobs she managed



to stumble out "do you remember in the last session we were asked the question which each of us had to answer individually 'what does God mean to you'? Well", she said, "Everyone in the group had something to share and I had nothing. He has never meant anything to me. I felt so left out and alone, so totally lost". While I then proceeded to try and comfort her there was a song rising up in my heart, because here was the first sign of a new desire for a spiritual dimension being born in her life as well.

A number of years later she did a similar course with St Luke's Hospice, only the aim there was to come to terms with her own death before being able to help others face the same thing. She went on to complete the hospice counselling course and became a qualified counsellor.

By the late nineteen-seventies my life was gathering momentum. I was absolutely loving the veterinary work and at the same time there was a new dimension opening up to me, the extent of which I could never have guessed. I was rolling on into a personal tsunami. With that on the horizon, let's leave it here and pick it up again next time.

FARM ANIMALS





Effects of inorganic copper injection in beef cows at late gestation on fetal and postnatal growth, hematology and immune function of their progeny

In this study by Alejandro Martin Rodriguez and colleagues, to determine if Cu injection during late gestation can affect foetal and postnatal growth, haematology and immune function of progeny, 70 multiparous pregnant Angus cows, at 219 ± 15 d of gestation, were ranked by BW and BCS and randomly assigned to one of two treatments: Cu + (n = 35) in total 160 mg of Cu were administered subcutaneously in two moments (80 mg per moment) at 64 ± 15 d and 54 ± 15 d prepartum; and Cu- (n = 35), in total of 16 ml of sterile NaCl solution (9 g / l) were administered subcutaneously in two moments (8 ml per moment) at 64 ± 15 d and 54 ± 15 d prepartum. Calves from both treatments were weaned at 260 ± 15 d of age, male calves were separated from female calves and stockered on natural pastures until 690 ± 15 d of age, then placed into a feedlot for 104 d before slaughter.

At the beginning of the experiment, cows Cu serum concentration was similar (P = 0.34) between treatments and these reflected a severe Cu deficiency (Cu + = 24.2 ± 1.5 µg/dl; Cu- = 22.2 ± 1.4 µg/dl). At calving, Cu serum concentration was greater (P < 0.01) in Cu + cows than Cu- cows. Copper serum concentration in calves from Cu + cows was greater at birth (P = 0.02) and 75 ± 15 d of age (P < 0.01) and tended (P = 0.07) to be greater at 160 ± 15 d of age compared to calves from Cu- cows. Calf BW at birth did not differ (P > 0.10) between treatments, however, calf BW adjusted at 75 d of age tended to be greater (P = 0.10) in calves from Cu + cows compared to calves from Cu- cows. Calf ADG from birth to 75 d of age was greater (P = 0.04) in calves from Cu + cows compared to calves from Cu- cows. Calf hematological parameters and titers of neutralising antibodies against BHV-1 after primary and secondary vaccination against respiratory diseases did not differ (P > 0.10) between treatments. During finishing period, steers BW, 12th rib fat thickness and LM area were not affected (P > 0.10) by treatments. In summary, inorganic Cu injection during late gestation in Cu deficient beef cows allows to increase Cu serum concentration in calves from birth to 160 d of age. This event was associated with an increase in ADG and a tendency to increase BW during the first 75 days of life. After 75 days of age, any effect on the offspring performance was not observed.

(Research in *Veterinary Science*, Volume 139, October 2021)

Effect of dietary supplementation with grape residue flour on weight gain, metabolic profile, leukogram, proteinogram and antioxidant response in suckling lambs

The objective of this study by Vitor L. Molosse and co-workers was to determine whether the addition of grape residue flour (GRF) in the diet of suckling lambs would improve their health and consequently enhance their growth. They used 48 lambs, 30 days of age divided into four treatments with four repetitions each, with each repetition consisting of three animals. The groups were identified as follows: G-0%, used as a control (without GRF) and G-0.5%, G-1% and G-2% referring to treatment with grape residue flour in doses of 0.5%, 1%, and 2% of inclusion in the concentrate, respectively. Lambs in groups G-1% and G-2% had higher final body weights, weight gain and average daily gain (ADG) compared to the other groups.

GRF dietary supplementation had good antioxidant potential, being able to stimulate glutathione S-transferase (GST) activity and consequently reduce levels of reactive oxygen species (ROS) in lambs that consumed the highest dose of GRF (G-2%). GRF supplementation improved humoral responses, with increased serum levels of heavy-chain and light-chain immunoglobulins; however, there was a reduction in serum

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ceruloplasmin levels in these lambs. We observed higher concentrations of glucose and triglycerides in lambs in the 2% group. There were lower lymphocyte counts in lambs that received GRF. Lambs supplemented with the highest doses of GRF (G-1% and G-2%) had lower total bacterial counts in the faeces. We conclude that the use of GRF in the supplementation of suckling lambs improved animal health, as it stimulated the antioxidant and immune systems and consequently favored their growth.

(Research in *Veterinary Science*, Volume 139, October 2021)

EXPERIMENTAL

In vivo evaluation of deer antler trabecular bone as a reconstruction material for bone defects



Availability of graft materials to fill up osseous defects has always been a concern in orthopaedic surgeries. Deer antler material is a primary bone structure that is easy to collect and could serve as a xenograft. This study by Pierre P. Picavet and co-workers examines the behaviour of red deer antler trabecular cylinders in critical size distal femoral epiphyseal defects in 11 rabbits, and evaluates the effect of the decellularisation protocols.

Two preparation regimes (A and B) were used, with and without lipids and proteins. Radiographs were taken immediately after surgery and after euthanasia 12 weeks post-implantation. Histological evaluation was performed on non-decalcified 10-µm sections with a van Gieson picro-fuchsin staining protocol.

A region of interest was defined for each histological section, evaluating the inflammatory reaction, the fibrosis process, and the osteogenesis.

Each histological section was microradiographed to evaluate bone contact, presence of synostosis, remodelling and ossification processes.

All antler cylinders were successfully implanted. Final radiographic analysis demonstrated osteointegration of most implants at various stages. Light to moderate inflammation around the grafts was noted with only one case showing full encapsulation.

A variable degree of intimacy between implant and host bone was evidenced, with bone remodelling and osteogenesis of various intensity being present in all implanted sites. No differences were found between group A and B.

Removal of lipids and proteins in the grafts surprisingly did not seem to matter. Decellularisation and sterilisation protocols may be advocated. Although it presents several limitations, this study shows some promising results regarding antler trabecular bone osteointegration.

(Research in *Veterinary Science*, Volume 138, September 2021)

CANINE

Digital Lesions in Dogs: A Statistical Breed Analysis of 2912 Cases

Breed predispositions to canine digital neoplasms are well known.

However, there is currently no statistical analysis identifying the least affected breeds. To this end, 2912 canine amputated digits submitted from 2014–2019 to the Laboklin GmbH & Co. KG for routine diagnostics were statistically analysed by Julia Maria Grassinger and colleagues. The study population consisted of 155 different breeds (most common: 634 Mongrels, 411 Schnauzers, 197 Labrador Retrievers, 93 Golden Retrievers).

Non-neoplastic processes were present in 1246 (43%), tumour-like lesions in 138 (5%), and neoplasms in 1528 cases (52%). Benign tumours (n = 335) were characterised by 217 subungual keratoacanthomas, 36 histiocytomas, 35 plasmacytomas, 16 papillomas, 12 melanocytomas, 9 sebaceous gland tumours, 6 lipomas, and 4 bone tumours.



Malignant neoplasms (n = 1193) included 758 squamous cell carcinomas (SCC), 196 malignant melanomas (MM), 76 soft tissue sarcomas, 52 mast cell tumours, 37 non-specified sarcomas, 29 anaplastic neoplasms, 24 carcinomas, 20 bone tumours, and 1 histiocytic sarcoma. Predisposed breeds for SCC included the Schnauzer (log OR = 2.61), Briard (log OR = 1.78), Rottweiler (log OR = 1.54), Poodle (log OR = 1.40), and Dachshund (log OR = 1.30).

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Evaluation of digital thermography imaging.... <<< 37

Jack Russell Terriers (log OR = −2.95) were significantly less affected by SCC than Mongrels. Acral MM were significantly more frequent in Rottweilers (log OR = 1.88) and Labrador Retrievers (log OR = 1.09). In contrast, Dachshunds (log OR = −2.17), Jack Russell Terriers (log OR = −1.88), and Rhodesian Ridgebacks (log OR = −1.88) were rarely affected.

This contrasted with the well-known predisposition of Dachshunds and Rhodesian Ridgebacks to oral and cutaneous melanocytic neoplasms. Further studies are needed to explain the underlying reasons for breed predisposition or "resistance" to the development of specific acral tumours and/or other sites. V

(*Vet. Sci.* 2021, 8(7), 136)

EQUINE

High-serum GGT activity in racehorses



This study by Sabine Mann and co-workers in the USA aimed to evaluate the role of oxidative stress, cholestasis, liver injury and infection with equine hepacivirus (EqHV) or equine parvovirus-hepatitis (EqPV-H) infection in racehorses with increased serum gamma-glutamyl transferase (GGT) activity.

The work consisted of a pilot study with eight horses with elevated serum GGT activity (≥50 U/L) and eight controls with normal GGT activity, followed by a larger study with 27 case- control pairs from three different yards. Serum liver chemistries, selenium measurements, viral PCR, and metabolomics were performed.

With both studies combined, the overall prevalence of EqHV was 9% and the overall prevalence of EqPV-H was 36%. There was no difference in prevalence or copy numbers between cases and controls for either virus. Cases had decreased serum selenium concentrations, higher serum glutamate dehydrogenase (GLDH) and alkaline phosphatase (ALP) activities and higher serum bile acid concentrations compared to controls. Metabolomics findings were not consistent between the two studies, with different metabolites emerging from each analysis. The authors concluded that the mechanism underlying high GGT activity in this population is likely complex and multifactorial, involving hepatic injury and possible cholestasis as well as oxidative stress. EqHV or EqPV-H infections are unlikely to be the primary cause for the high GGT syndrome seen in Thoroughbred racehorses. V

Osteoarthritis prevention using MSCs

In this study Lélia Bertoni and co-workers in France evaluated allogeneic bone-marrow-derived and umbilical cord blood- derived mesenchymal stem cells (MSCs) to prevent the development of osteoarthritis (OA) in an equine model.

Osteoarthritis (OA) is a significant cause of pain in both humans and horses. In both species, regenerative therapy with allogeneic MSCs appears to be a promising treatment but, to date, no in vivo studies have attempted to compare the effects of different cell sources on the same individuals.

This study evaluated the ability of a single blinded intra- articular injection of allogeneic bone-marrow (BM) derived MSCs and umbilical cord blood (UCB) derived MSC to limit the development of OA-associated pathological changes compared to placebo in a post-traumatic OA model applied to all four fetlock joints of eight horses. The effect of the tissue source (BM vs. UCB) was also assessed on the same individuals.

Observations were carried out using clinical, radiographic, ultrasonographic, and magnetic resonance imaging methods as well as biochemical analysis of synovial fluid and post- mortem microscopic and macroscopic evaluations of the joints until Week 12. A significant reduction in the progression of OA-associated changes measured with imaging techniques, especially radiography, was observed after injection of bone-marrow derived mesenchymal stem cells (BM-MSCs) compared to contralateral placebo injections.

These results indicate that allogeneic BM-MSCs are a promising treatment for OA in horses and reinforce the importance of continuing research to validate these results and find innovative strategies that will optimise the therapeutic potential of these cells. However, they should be considered with caution given the low number of units per group. V

Use of adhesive for anastomosis

This pilot study by Augustin Lenoir and co-workers in France compared the use of a UV-polymerisable methacrylate adhesive (UV-PMA) versus an inverting pattern as the second layer of a two-layer hand-sewn jejunal anastomosis in horses.

Resection and anastomosis of small intestine during colic can lead to adhesions and recurrent colic. Several methods are available to reduce the rate of adhesions in the post- operative period, such as the use of serosal barriers. Surgical glues form a smooth surface, are fast to apply, and could reduce surgery time when performing anastomosis. A recently developed UV-PMA is designed to anchor into the biological tissues' top surface offering sealant and a smooth cover over the anastomosis site. This adhesive was used ex vivo on 15 samples of equine jejunum as the second layer of a two-layer anastomosis (1L-UV-PMA group) and compared to a two- layer anastomosis (simple continuous pattern covered with a Cushing pattern; 2L-CT group), in terms of feasibility, bursting strength pressure (BSP), luminal diameter reduction (LDR), and time of construction. Data were analysed using a paired t-test or a chi-square test.

The results showed no statistical difference in BSP, LDR, or any mode of failure between the two anastomosis types. However, the glue anastomosis formed a tunnel-like anastomosis and shredded under pressure, before apparition of leakage, preventing its usage in clinical cases with this methodology. The authors concluded that modification of the technique is warranted before testing in clinical cases.

Topical ophthalmic atropine in horses

This study by Lena Ström and co-workers in Sweden, France and the UK investigated the administration of topical ophthalmic atropine in horses, including the pharmacokinetics and effect on intestinal motility.

Topical ophthalmic atropine sulfate is an important part of the treatment protocol in equine uveitis. Frequent administration of topical atropine may cause decreased intestinal motility and colic in horses due to systemic exposure. Little is known on atropine pharmacokinetics in horses and this knowledge gap could impede the use of atropine because of the presumed risk of unwanted effects. Additional information could therefore increase safety in atropine treatment.

Atropine sulfate (1 mg) was administered in two experiments: In part I, atropine sulfate was administered intravenously and topically (manually as eye drops and through a subpalpebral lavage system) to six horses to document atropine disposition. Blood-samples were collected regularly and plasma was analysed for atropine using UHPLC- MS/MS. Atropine plasma concentration was below lower limit of quantification (0.05 µg/L) within 5 h, after both topical and i.v. administration. Atropine data were analysed using population compartmental modelling and pharmacokinetic parameters estimated. The typical value was 1.7 L/kg for the steady-state volume of distribution. Total plasma clearance was 1.9 L/h/kg. The bioavailability after administration of an ophthalmic preparation as an eye drop or topical infusion were 69% and 68%, respectively. The terminal half-life was short (0.8 h). In part II, topical ophthalmic atropine sulfate and control treatment was administered to four horses in two dosing regimens to assess the effect on gastrointestinal motility. Borborygmi-frequency monitored by auscultation was used for estimation of gut motility. A statistically significant decrease in intestinal motility was observed after administration of 1 mg topical ophthalmic atropine sulfate every 3 h compared to control, but not after administration every 6 h. Clinical signs of colic were not observed under any of the treatment protocols.

Taking the plasma exposure after topical administration into consideration, data and simulations indicate that eye drops administered at 1 and 3 h intervals will lead to atropine accumulation in plasma over 24 h. A 6 h interval allows total washout of atropine between two topical administrations. If constant corneal and conjunctival atropine exposure is required, a topical constant rate infusion at 5 µg/kg/24 h offers a safe alternative.

(*Equine Veterinary Education*, July 2021)

Animal Ethics and Welfare

Food animal welfare – Pain management during routine farming procedures

The SAVC recently circulated an article: **Pain Management in Farm Animals: Focus on Cattle, Sheep and Pigs** (Steagall *et al.*, 2021).

This topic requires open discussion about pain recognition and control by farmers and vets to ensure that scheduled drugs remain under veterinary control in South Africa.

Article summary:

The article clarifies the physiology of pain and the effects of perceived pain on the welfare of animals. It discusses more recent pain scoring systems as well as the advantages of newer farming methods and technologies.

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Practical and legal challenges surrounding the provision of pain management is often related to the tendency of undertreatment of pain in farm animals. Challenges include cost, intensive systems, lack of education and recognition of pain-related behaviours by vets and farmers alike. A useful pain assessment summary is provided for cattle, sheep and pigs (with live links to detailed articles). An example is the sheep grimace scale (SGS). This considers facial expression factors such as orbital tightening, flehmen and ear and head position to deduce the level of pain experienced by the individual sheep (Häger C, 2017). The cost-benefit analysis, harms and ethical justifications for using analgesics and/or anaesthetics is supported by proven benefits for overall animal production. The article also makes recommendations to improve pain recognition and analgesic management by farmers.

There appears to be an increasing number of lay people (people other than the farmer's *bona fide* veterinarian), delivering veterinary services and drugs to South African farmers (our clients). For example, a recent article in *Veeplaa*s (June 2021; vol. 12, no. 6) promotes dehorning using a keystone dehorner or elastrator.

This article is not written by a veterinarian and does not consider the pain experienced by and damage caused to the animal. In fact, greater consideration is given to the damage that the horns cause to other animal and farm workers. Lay people supplying veterinary products is, however, a global issue.

This video is about the use of local anaesthetics during banding (elastrator):

https://sciences.adelaide.edu.au/study/honours/honours-projects/local-anaesthesia-lamb-marking.

Unlimited access to analgesics and/or anaesthetic drugs, which should remain the sole domain of registered veterinarians, may encourage some farmers to use these drugs to perform procedures which would and should be reserved for veterinarians to perform.

It is with this in mind that the last recommendation made by Steagall *et al*. is of particular importance:

"There is currently a gap in appropriate legislation, regulations, and recommendations for pain mitigation during routine and invasive husbandry procedures in farm animals. These discussions should involve veterinarians, producers, associations, societal and governmental bodies, and the industry, among many stakeholders."

The WVA is in the process of drafting a position statement about pain management in production animals, based on this article. It would be valuable if rural vets could provide feedback about the practical feasibility of the recommendations made in this article. Feedback is required for specific procedures which are routinely performed in South Africa. These are: castration, branding, ear notching and tagging, tail docking, dehorning and disbudding, as well as nose-ringing.

We encourage the rural vets in South Africa to make use of this opportunity, and work on a strategy to keep scheduled drugs under veterinary supervision. This is to ultimately ensure that they are used responsibly, whilst improving the welfare of food producing animals.

Rural and farm vets are requested to submit comments on the control of analgesics and anaesthetic medications by veterinarians, and their uncontrolled use by lay people to the Animal Ethics and Welfare Committee of SAVA.

Laboratory Animal Welfare: Recommendations for Ensuring Good Welfare of Horses Used for Industrial Blood, Serum, or Urine Production (X. M. Vilanova *et al*, Animals 2021, 11, 1466)

As part of its mandate in informing members, the SAVC recently forwarded the above article for the attention of the profession in keeping abreast of animal welfare science progress. This is aimed towards achieving a better quality of life for domesticated animals used for food, fibre, recreation and scientific uses. As the results of animal welfare science are increasingly becoming the basis for modern animal welfare policy, it is important for veterinarians to keep abreast of the complex process of translating science into practice in serving the animal industries and acting as advocates for animal welfare advancement.

Simple Summary: Because of their large size, blood, serum or other substances are often collected from horses for production of biologics and therapeutics used in humans and other animals. There are few international guidelines that provide recommendations for caring for horses kept for these purposes. In this paper, general guidelines are provided to ensure well-being of horses kept for production of biologics.

Apart from the interesting technical aspects of biologics sourced from horses, there is an extensive review of animal welfare and ethical considerations pertaining to equines. Of particular interest is the focus on outcome-based parameters which quantify health, production, behaviour and physiological measurements as an index of an animal's welfare and sentience. These are more consistent with the revised five animal welfare domains model, which focuses on animal perceptions rather than just providing the necessities of food water, shelter, health care and adequate social contact with their own species. The paper provides strategies for animal care procedures to improve horse well-being in transportation, feeding, housing and social contact, handling, and foot care. Special husbandry requirements for the production and harvesting of some biological products including blood collection, which is the major procedure practised on laboratory horses. Coupled with this is a section on considerations for maximum volume blood collection and permissible percentage blood volume removals related to recovery periods to restore circulating blood volumes. This information will be of interest to colleagues associated with supporting the laboratory use of horses as well as equine practitioners in general to improve the welfare of horses in general.

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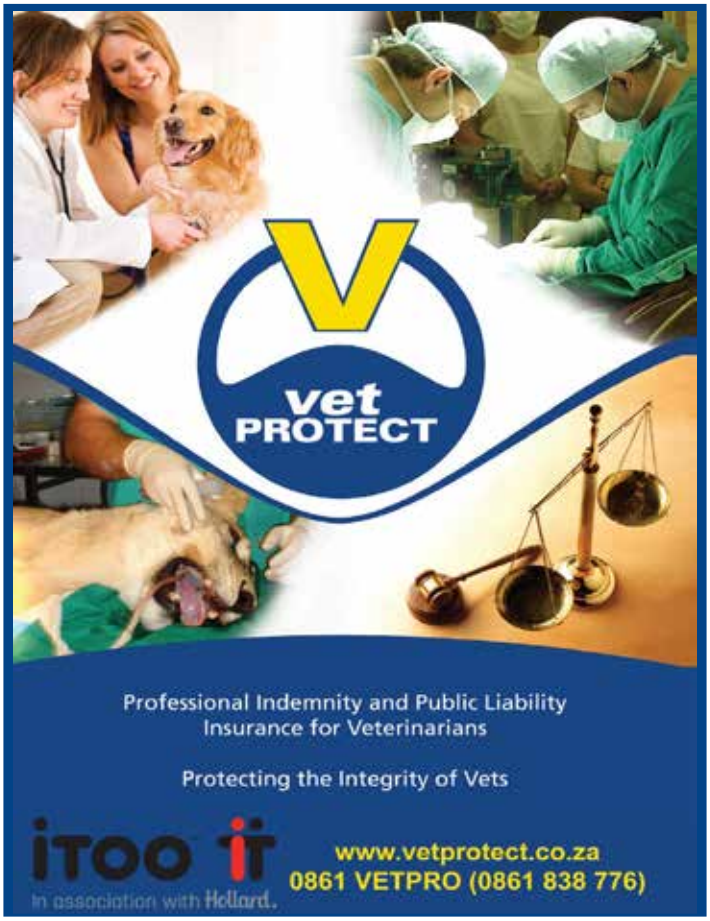
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Dr Sara Boyd
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Consulting Specialist Small Animal Surgeon
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Animal Anti-Cruelty League-Johannesburg has a vacancy for a full day or half day veterinarian registered with the SAVC, in our small animal welfare hospital in the south of Johannesburg.

We focus on primary health care, consultations and sterilisations.

Package negotiable.

Please contact Sr. Cindy Price on (011)435-0672, 084 408 1459 or hospital@aacl-jhbnb.co.za

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SCOTTBURGH VETERINARY CLINIC

3rd Vet wanted. Busy well equipped small animal practice in KZN.

Pleasant working environment. New grads welcome.

Contact Lynette 0721059191 or email cv to scottvet@scottburgh.co.za

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VETERINARIAN REQUIRED for our 24 hour service

We are looking for a self-motivated, enthusiastic and dedicated veterinarian for our 24 hour service.
Shifts will be on a shared rotation with some night, day and weekend work.
The After Hours vet will be supported by a team of nurses, assistants and administrative staff.

Attractive time off
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If you think this position is for you, contact our Practice Manager, Bev on [031] 2678000 or email bev@westvet.co.za

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Animal Rescue – Cape Town, requires a full time Vet to join the team.

Salary negotiable with experience.

Animal Welfare experience an advantage.

Email CV: mandy@tears.org.za

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Rotations in medicine, surgery, emergency & critical care, diagnostic imaging, anaesthesiology, ophthalmology.

Some GP consults required
No on Call.
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PARK
Veterinary Hospital

Park Veterinary Hospital in Boksburg is looking for a full time veterinarian to join our team.

We are a small animal and exotic practice equipped with digital Xray, Ultrasound and in-house Idexx Catalyst.

No afterhours and all weekend work is shared evenly.

Please email CV to parkvet@global.co.za

WAHG
WELLINGTON ANIMAL HOSPITAL GROUP

WELLINGTON PAARL FRANSCHHOEK

The Wellington Animal Hospital Group (WAHG) is looking for a small animal vet to join their current team in the Winelands of the Western Cape.

Please send CV to Gillian
wellington@wahg.co.za
or phone her at 0218731196

VETERINARIAN JOB OPPORTUNITY IN ABU DHABI, UAE

Come enjoy the sun and all that the UAE has to offer! Full time, western trained small animal associate veterinarian - must be willing to work as part of a co-operative veterinary team that provides the highest standard of customer and patient care. Excellent small animal medical and surgical skills required - any areas of specialization (orthopedics, exotics, etc...) beneficial but not essential. Minimum of 2 yrs experience required for UAE licensure.

Email cover letter & CV:
director@americanvet.ae

Visit us at:
www.americanvet.ae

VETS ON CROWN







Location: Sydney – Australia

Do you want to work and live in one of the most beautiful, safe and multicultural city in the world then look no further. We will look after all the immigration requirements and obtain you a 4 years visa with the view to become permanent residence of Australia.

Brand new Hospital in Sydney, Australia is looking to hire a Veterinarian doctor from South Africa

Our state-of-the-art Hospital located in the heart of Surry Hills in Sydney. Surry Hills is a vibrant inner-city suburb with loads of culture and character, and really close to everything Sydney has got to offer.

- Brand new Hospital
- State of art facilities
- Perfect location
- Walking distance to Central Station and other public transports.

We are looking for an enthusiastic, positive and happy full-time vet to join our friendly team. Our hospital is all about team work and servicing our clients in the best possible way. We will look after all the immigration required and obtain you a 4 years visa with the view to become permanent residence of Australia. We pride ourselves in providing outstanding pet care services to our customers. We have an iconic three level building which offers boarding for cats and dogs, grooming and day-care in addition to our brand new hospital.

We have a friendly, happy and energetic team and would love someone with the same personality to join us.

We are ideally looking for a minimum of 2 years' experience. We can provide you with lots of support and you get to use a range of equipment such as in-house blood machine, DR Radiography System, Ultrasound, IM3 Dental machine, Endoscope, Laser machine, Dental X-ray unit etc.

We are looking for:

- A Veterinarian doctor who has a minimum of 2 year working experience as a Vet in South Africa, Singapore, Australia, USA or UK.
- Commitment to provide first-class and premium care to our patients
- A friendly team players who is positive, happy and resourceful
- Ability to work independently and make decision if need be
- Exceptional skills on client relationship building and communication

Salary is negotiable and commensurate with experience.

Please email your resume to omid@vetsoncrown.com.au or contact Dr Omid Sadeghpour +61 0414 801 458 if you have any question regarding the position.

VETERINARIAN WANTED FOR CLUNY ANIMAL TRUST, FOURIESBURG - FREE STATE

Are you a veterinarian looking for a new experience? For over 10 years, the Cluny Animal Trust has been providing much needed veterinary care to animals of the poor and previously disadvantaged across the entire eastern Free State. As of October 2021, we require a full-time veterinarian to join our small but committed team. We offer interesting, diverse, and challenging cases and you will work with a team that is passionate about animal welfare and who strive to never stop learning and who love going to work every day. We have our own small community clinic, as well as Daisy, our very own mobile operating theatre - we are based in the peaceful town of Fouriesburg, but you have the hustle and bustle of Bethlehem just a mere 20 minutes away.

Over the years, the Cluny Animal Trust has developed a well-earned reputation for our dedication to the people and the pets of the communities that we work in. So, if you are sick and tired of the urban rat race, this position offers you an opportunity to rediscover your passion for healing and to maintain a work + life balance in the picturesque and beautiful eastern Free State.

Think you're the veterinarian we are looking for?

Please email your detailed CV with your salary requirements (please bear in mind we are a welfare organisation) to **imogen@clunyanimaltrust.co.za** and you can find out more about us by visiting our website - **www.clunyanimaltrust.co.za** or our Facebook page **https://www.facebook.com/clunyanimaltrust.co.za**



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VETERINARIAN / VEEARTS

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It is an excellent time to consider applying for jobs in Australia.

- Priority processing of visas for vets
- Many jobs available
- Variety of locations (city and rural)

As well as Australia, we have jobs in New Zealand, the UK and Asia. For more information, please contact: Dr Mark Eagleton BVMS Vetlink Employment Service WhatsApp +61 412 863 187 Email mark@vetlink.com.au www.vetlink.com.au Vetlink is a free service for job seekers. Ref21JL02

CANADA

Full-time veterinarian required for modern, fully equipped, domestic pet day clinic in Okotoks, Canada. Eligibility to practice in Canada is essential (completion of at least parts 1 and 2 of NAVLE). A work offer can be provided if required. View us at: www.okvc.za Respond by email: info@okvc.ca Ref21AU01

GAUTENG

JOHANNESBURG

We're looking for a veterinarian who loves people and pets to join our team. We are based in the heart of Johannesburg and our practices make up some of the oldest private practices in the country. You can expect a friendly welcoming and open culture from top to bottom. Ego is not a welcome guest here. We want humble team-mates who are not only looking out for themselves but the best interest of everyone. Send your CV to jobs@vetjobs.co.za to apply. Ref19NV02

KRUGERSDORP

Rant en Dal Animal Hospital is looking for a veterinarian to join our busy companion animal practice. This position is suitable for a general veterinarian that is keen to broaden her/his horizons. The work environment is stimulating due to the variety of veterinary services offered including reproductive, general medical and surgical work. We also see a fair amount of exotics. In return we offer a team-based support structure with ample time off, no after hours and competitive salary. Applicants must be registered with SAVC. Applications to be sent to reports@rantendal.co.za Ref20JL08

JOHANNESBURG

Veterinarian needed for small-animal clinic in Johannesburg. Position would suit candidate interested in owning their own clinic. New graduates welcome to apply. Contact 082 336 0670 or email jansenanton898@gmail.com Ref21JA04

PRETORIA-NOORD

Pretoria-Noord Dierekliniek is looking for one or two registered full-time veterinarians who are bilingual in both English and Afrikaans. We are a well-established small-animal practice. New graduates are welcome to apply. Please send CV's to dr.c.opperman@gmail.com or contact Dr Zilia Opperman on 0836534917 for more information. Ref21MY06

JOHANNESBURG

Sandringham Veterinary Hospital, based in the north eastern suburbs of Johannesburg has a permanent position open for a small-animal vet. Good work/life balance with a full day off during the week and a 4-week rotation over weekends. No after-hours. Person with interest and some surgical experience required. If interested, please email your CV to sandringhamvetacc@gmail.com or contact us on 0116405133. Ref21JN01

NORTH WEST / NOORD-WES

POTCHEFSTROOM

Onafhanklik 8 uur weeksdag. Elke 2de naweek 8 - 12. Verkieslik beenpensjirurgie en "ex cap CCR". Betaalde verlof: 16 Desember - 5 Januarie. R 40 000 p.m. Alle na-ure fooie, plus maandelikse bonus gelykstaande aan na-ure fooie, bv. 8 gevalle teen R 1 500 elk: R 12 000 plus bonus van R 12 000. Jaarlikse bonus: 1 ste jaar R 60 000, 2 de jaar R 120 000 en 3 de jaar R 540 000. C.V.: suzettezee@gmail.com Ref20NV04

EASTERN CAPE / OOS-KAAP

PORT ELIZABETH

Veterinarian required. Full-time veterinarian required in well-established small-animal, equine and wildlife practice in Port Elizabeth. Fully-equipped, modern, purpose-built hospital. Competitive salary package. Upmarket 3-bedroom house with pool available. Email CV to kkvet@mweb.co.za For information phone 0842086741. Ref20DC01

WESTERN CAPE / WES-KAAP

KLEINMOND

Veterinary assistant needed at SA practice in Kleinmond, W Cape. Experienced motivated vet, enthusiastic about practicing evidenced-based medicine. Alternate Thursday, Friday, Saturday and Sunday off, allows for lots of free time. Hours are negotiable, can be tailored-made to suite the candidate. X-rays, IDEXX-lab, ultrasound and access to specialists provides opportunities to work up cases, practice vet medicine to a high standard. A/hrs shared, not too imposing. Interested, email CV to Dr Peter Dave davefamily@telkomsa.net WhatsApp 0834405191.Ref21MY14

CAPE TOWN, NORTHERN SUBURBS

Kuilsrivier Veterinary Clinic. We have a work opportunity for a full-time small-animal vet. Alternatively, a long-term, part-time Vet. From 1 August 2021. Salary very negotiable, depending on experience. Accommodation can be provided free of charge. No afterhours. Please email Kuilsriviervet@hotmail.com or phone the practice manager on 0219060277. Ref21JL01

LOCUM NEEDED / LOKUM BENODIG

GAUTENG

Rant en Dal Animal Hospital LOCUM OPPORTUNITY! LOCUM OPPORTUNITY! LOCUM OPPORTUNITY! Locum opportunity from April 2021 – Aug 2021 while one of our doctors is on maternity leave. We are a busy companion animal practice. The work environment is stimulating due to the variety of veterinary services offered including reproductive, general medical and surgical work. We also see a fair amount of exotics. Competitive hours and salary.

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Every third weekend and public holiday. Applicants must be registered with SAVC. Applications to be sent to reports@rantendal.co.za Ref21FE01

KWAZULU-NATAL

BLUFF, DURBAN

Locum veterinarian. Small, single vet practice on the Bluff, Durban looking for a locum to do a few days every month. Contact George 082 651 1112 Ref21MY07

VETERINARY NURSE / VEEARTSVERPLEEGSTER

WESTHERN CAPE / WES-KAAP

HERMANUS

Hermanus Animal Hospital seeks the services of a veterinary nurse registered with the South African Veterinary Council. The hospital is a mixed practice. The practice is fully equipped, laboratory, etc. Limited afterhours. Accommodation possible. Please send CV to hah@hermanus.co.za. Ref21AP03

PRACTICE FOR SALE / PRAKTYK TE KOOP

CULLINAN

Practice for free. Cullinan, Gauteng... we are selling the property and the practice clientele thrown in as a bonus...14 years' successful practice. We want to pay it forward and offer a young vet family who wants to see their children grow up while still able to work full time. Our next chapter has arrived, but would love to see this venture open up doors for the next person. Whatsapp Dr Renée 083 379 3454 Ref21JN03

FOR SALE / TE KOOP

ANAESTHETIC MACHINE

New veterinary anaesthetic machine with refurbished TEC4 vaporiser or with new MSS3 forane vaporiser. We convert your Mk3 halothane vaporiser to forane. All servicing and calibrations done by retired chief anaesthetic technician ex-Groote Schuur Hospital. Call Cassim 021 7052880 / 0826819742, email encass@telkomsa.net or visit www.cvanaesthetics.co.za Ref13JA01

ADVANCED ANAESTHETIC EQUIPMENT

World-renowned cost-saving anaesthetic equipment – DESIGN AND ENGINEERING AWARDS. As a research anaesthetist, Dr Humphrey perfected the simplest, most-advanced efficient "green" anaesthetic equipment designed for all situations. Result? The multi-purpose "Humphrey ADE-circle system®", "FREE-OX", "WALL-MOUNT" anaesthetic machines, and new "PACK-FLAT MINI-PORTABLE" unit. New 2021 models. sales@aesmedical.co.za, 031-266-4769; www.aesmedical.co.za Ref21MY10

ADVANCED ANAESTHETIC "MINI-PORTABLE PACK-FLAT" MACHINE 2021 NEW LIGHTWEIGHT CONCEPT

Designed as START-UP or highly-portable cost-saving unit for general use or WILDLIFE environment, this new model has everything you need, including the "Multipurpose Humphrey ADE-circle breathing system" and vaporiser. Table-top/wall mounted. Just 11.4 kg complete. Simple quick assembly. sales@aesmedical.co.za, 031-266-4769; www.aesmedical.co.za Ref21MY11

ADVANCED ANAESTHETIC EQUIPMENT

Over 35 years Dr David Humphrey, MBBS.DA, an internationally well-known research anaesthetist, has designed highly-efficient innovative equipment including 2021 top-of-the-range "FREE-0X" machine with oxygen concentrator, "WALL-MOUNT/TABLE-TOP" and "PACK-FLAT MINI-PORTABLE" machines. Endorsed by Dr Kenneth Joubert. However, beware cheaper poorly-made copies. See our products above. www.aesmedical.co.za Ref21MY12



JOB SHADOW

Job Shadow is exactly what its name suggests, it is a **company which facilitates job shadowing** for high school students, in order for them as well as their parents to be more informed with regards to their **profession. It's a practical way of getting to know a job**, before committing to study for it.

We are now looking for companies and professionals to jump on board as Job Mentors.

We are offering many benefits such as claiming back from your SED Fund for CSI as well as money paid back! To elaborate further as to how you can get involved, please contact

Lorinda@jobshadow.co.za or call on 082 870 6220.

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The UK is at the forefront of the Veterinary industry and Medivet is at the forefront of building the future of veterinary care. Our unique hub and spoke model, consisting of over 331 practices and 24 state-of-the-art 24-hour centres, champions collaborative working, and clinical excellence.

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As an accredited A-rated sponsor, we can support your move to the UK and issue a Certificate of Sponsorship for Tier 2 (general) visas. We offer financial support in the form of a loan to cover the cost of the visa application and NHS surcharge (Immigration Health Surcharge), totalling £2,622.

We also offer a financial allowance of up to £12,000 to help with accommodation.

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Deliver exceptional care for pets and further your skills in the UK with a rewarding career as a Veterinary Surgeon with Medivet.

For more information, or to register to attend the following CPD webinar working in partnership with Optivet, contact amanda@optivet.co.za

"Dealing with some scary looking eyes in private practice"
8pm (SAST) Tuesday 24th August 2021

careers.medivet.co.uk

OPTIVET
CREATING CONNECTIONS

THE WONDER OF COMPLIMENTS

(Editor's note: Due to a communication problem we do not have a contribution from Mike Lowry this month. With Tod's permission, a chapter from his new book – "The Scapegoat" follows below.)

Last weekend's Ramsgate Book & Art Festival was good. Very, very good. People of all ages, shapes, sizes and blood groups mixed, shared experiences and suggestions, challenged one another productively, laughed and passed compliments.

Compliments are the life blood of any artist except maybe Vincent van Gogh, but Nick van der Leek's presentation on the red-bearded tortured genius left us wondering about that too, and how the heck he died. Suicide? Shot by a disapproving prospective father-in-law? Compliments are the jelly-tots of life or perhaps the vital red blood corpuscles that keep us going.

This is quite a maudlin start to this bit of writing. But forge on, there's drama ahead!

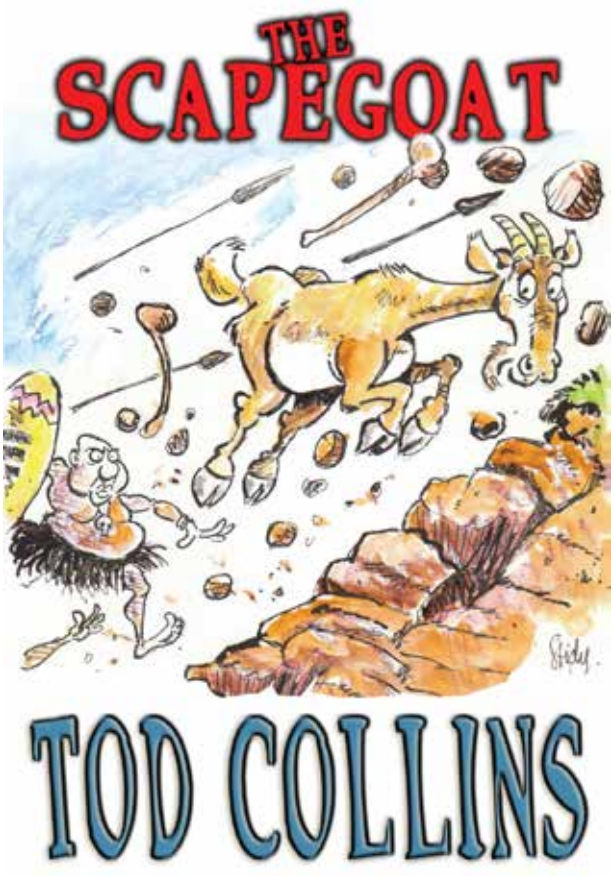
During a lunch break at the festival I got chatting to an artist, a most attractive woman. One line of chat led to another and she was surprised to learn that the veterinary profession has a terrifyingly high incidence of anxiety and depression … and suicide! She had once been on her way to commit suicide, she burst out, and I spluttered a mouthful of Castle lager.

She had been – still is – a painter and had been persuaded by her millionaire father to spend time in "If you're going to San Francisco, be sure to wear some flowers in your hair" to further her "brilliant" (sic) artistic skills, immerse herself in the world of relaxed art, and sell her amazing works. (These superlative adjectives were showered on her by people she later recognised as spongers, as well as by her father who really didn't need her cluttering his lavish life). In California she fell in love with a dashing young compliment-spewing businessman whom she married, and she also fell in with a group of painters who blew vast amounts of smoke up her zoom-pipe so she began to believe she was the real deal. The next ah, Whistler, Warhol, O'Keeffe or Tretchikoff. Compliments from her circle of friends flew thick and fast.

"Don't worry," the Bohemian crowd reassured her when yet another gallery rejected her pieces, "your big break is just around the corner." While behind her back they were sniggering, they were delighted with the funds with which her rich father and even richer husband (both running successful business corporations in their respective countries) were keeping her happy. She in turn was keeping her mottled pals happily well fed and inhaled and infused.

Her works continued to receive tepid interest in local and distant galleries and salons. She had the funds to distribute her works through smart–paid-agents who also paid her palette-loads of false compliments.

Inevitably the day came when she discovered, realised, her dashing and well-travelled husband had a respectable number of other lovers – of both genders. At much the same time an honest salon owner broke the truth that her paintings were actually rubbish, and her Bohemian friends were simply parasitising her and festooning her with hungry, obsequious, compliments.



The art dealer had at last pointed out to her that her works were at best, poor to average, verging on the awful, shit. Her world crashed.

That was when she made her way towards the Golden Gate Bridge.

She told me the man was somewhat like me. Middle to older aged, nondescript, wearing shaggy clothes and a tweed cap. (She was enough of an artist to notice and remember such details.) She said he was walking off the famous suspension bridge while she was, in somewhat of a drug-assisted haze, floating on to it. She had felt his eyes on her as they slowly approached each other and just before they passed he stopped and held his hand up, like a traffic cop on point duty.

"Pardon my intruding into your thoughts," he said, "but I must tell you that you have the most gorgeous face, especially your eyes."

He smiled, shrugged apologetically, nodded, and went on his way. She stood there for a minute, she said, perhaps ten minutes, then turned around.

And ended up at the Ramsgate Book & Art Festival twenty years later. I agreed with that bloke whom God had placed on the San Francisco bridge that she still has gorgeous eyes.

This morning while enjoying a lie-in, I began thinking about some hackneyed phrases about how an instant can change a life. The spontaneous moments or utterances so well described by Andy Andrews in his book "The Butterfly Effect." And as Trish brought me coffee in my Arsenal mug, I coined this bit of philosophy:

"An undeserved compliment given … is a tragedy, while A deserved compliment not given … is a sin."

Dagboek • Diary

General 2021

- **A Course in Human Ethics and Animal Rights.**
  Ongoing and online.
  Completion time: approximately 8 hours.
  Website: http://animalvoiceacademy.org
  Contact: admin@animalvoiceacademy.org

- **Acupuncture – Certified Mixed Species Course.**
  Ongoing and online.
  Info: Chi University: southafrica@tcvm.com or https://chiu.edu/courses/cva#about

- **Certification in Clinical Integrative Canine Rehabilitation (Through College of Integrative Veterinary Therapies).**
  Start 15th January 2021: Online.
  Contact: www.ahah.co.za/civt/ OR enrolment@civtedu.org

August 2021

- **NVCG Congress with David Church & Jill Maddison.**
  POSTPONED TO 06-16 September 2022 DUE TO COVID-19
  Durban
  Cape Town
  Johannesburg
  Info: Madaleen Schultheiss, Vetlink, 012-346-1590, www.vetlink.co.za

- **18th SASVEPM Annual Congress.**
  Hybrid Event
  25-27 August
  Venue: Forever Resort Warmbaths, Bela-Bela & Online
  Info: www.savetcon.co.za or corne@savetcon.co.za

September 2021

- **SAAPRA Virtual Annual Conference.**
  04-05 September
  Info: www.saapra.co.za

- **Southern Cape Branch Congress.**
  10-11 September
  Venue: Hyatt Hotel Oubaai, George
  Info: Madaleen Schultheiss, Vetlink, 012-346-1590, www.vetlink.co.za

- **49th Virtual PARSA Conference.**
  14-15 September
  Info: corne@savetcon.co.za or https://www.savetcon-admin.co.za/Register/main.php

- **4th International Congress on Parasites of Wildlife.**
  POSTPONED DUE TO COVID-19
  19-22 September (Postponed to September 2022)
  Venue: Skukuza, Kruger National Park
  Info: http://savetcon.savetcon.co.za/icpow21-2/ or corne@savetcon.co.za

- **RuVASA Annual Congress.**
  20-22 September
  Venue: The Boardwalk Hotel, Port Elizabeth
  Info: Madaleen Schultheiss, Vetlink, 012-346-1590, www.vetlink.co.za

October 2021

- **AOAC Sub-Saharan Annual Congress.**
  04-07 October
  Venue: Misty Hills Country Estate, Gauteng
  Info: corne@savetcon.co.za

- **Western Cape Branch Congress.**
  08-09 October
  Venue: to be confirmed
  Info: Madaleen Schultheiss, Vetlink, 012-346-1590, www.vetlink.co.za

- **Eastern Free State Branch Congress.**
  15-16 October
  Venue: to be confirmed
  Info: Madaleen Schultheiss, Vetlink, 012-346-1590, www.vetlink.co.za

November 2021

- **South African Association for Laboratory Animal Science (SAALAS).**
  09-10 November
  Venue: Potchefstroom University, GKSA Auditorium
  Info: Madaleen Schultheiss, Vetlink, 012-346-1590, www.vetlink.co.za









RuVASA
Ruminant Veterinary Association of South Africa

CONGRESS 2021

The Boardwalk Hotel, Port Elizabeth

20 - 22 SEPTEMBER 2021



PROTECTING OUR INDUSTRY: FROM CONCEPTION TO CONSUMPTION

DAY 01 | 20 September

07:00 Registration
07:30 Welcome
07:40 Reproductive Management of the Dairy Cow: What's Normal and What's Not, and How to Improve it if it's Not: Part 01 - *Dr Scott McDougall* *(sponsored by Ceva)*
08:25 Challenges and Opportunities in Cattle Production: A Veterinarian's Perspective - *Dr Calvin Booker* *(sponsored by Zoetis)*
09:00 Risk Factors for Bovine Brucellosis in KwaZulu-Natal - *Dr Thami Nogwebela*
09:10 Tissue Sampling, What Are We Talking About - *Dr Johan De Meulemeester*
09:45 Introducing the Exhibitors and Pharmaceutical Trade - *Dr Faffa Malan*
10:20 Tea
10:40 Forecast of the South Africa Economy - *Ms Nicky Weimar (Chief Economist: Nedbank)*
11:10 Reproductive Management of the Dairy Cow: What's Normal and What's Not, and How to Improve it if it's Not: Part 02 - *Dr Scott McDougall* *(sponsored by Ceva)*
11:55 Identifying Opportunities to Enhance Value to your Clients - *Dr Calvin Booker* *(sponsored by Zoetis)*
12:40 Lunch
13:40 Product Promotion: Ascendis
13:55 TBA
14:40 Effective Decision Making in Cattle Production - *Dr Calvin Booker* *(sponsored by Zoetis)*
15:25 Tea
15:50 The History of RuVASA, RPG, LHPG - *Dr Francois van Niekerk*
16:25 How to Analyse Research and Scientific Articles - *Dr Peter Thomson*
16:55 SAVC - *Dr Alfred Kgasi*
17:10 SAVA/SAVF - *Mr Gert Steyn*
17:25 AGM
17:55 Braai

DAY 02 | 21 September

07:00 Registration
07:30 Early morning session: Workshop to Establish a Common, Sustainable Approach to Liver Fluke Control - *Prof Gareth Bath*
08:15 Interventions that Improve Reproductive Performance: The Biology and Economics - *Dr Scott McDougall* *(sponsored by Ceva)*
09:00 BRD - What Do We Know and Where Do We Go from Here - *Dr Calvin Booker* *(sponsored by Zoetis)*
09:45 Trace Mineral Supplementation to Sheep in High Intensity Systems - *Ms Anri Strauss*
10:20 TrichLabCheck - A Voluntary Trichomonosis Inter-laboratory Project in South Africa - *Dr Dietmar Holm*
10:55 Animal Health Forum - *Dr Chris van Dijk*
11:10 Tea
11:40 Product Promotion: Boehringer Ingelheim
11:55 Interventions that Improve Reproductive Performance: The Biology and Economics - *Dr Scott McDougall* *(sponsored by Ceva)*
12:40 Opportunities to Improve Mastitis Control, Antimicrobial Stewardship and Farmer Engagement - *Dr Scott McDougall* *(sponsored by Ceva)*
13:25 Lunch
14:25 Product Promotion: Boehringer Ingelheim
14:40 How New Technology Adds Profit to a Real Farm, Working in Harmony with Vets - *Mr Paul Westaway*
15:15 Tea
15:45 The Effect of Different Volume Setting on Milking Machine Take-off Times - *Dr Inge Marie Petzer*
16:15 New Strain of *Staphylococcus Aureus* Challenging the Conventional Identification - *Dr Joanne Karzis*
16:45 A Century of Veterinary Education in South Africa - Prof Dietmar Holm
19:00 Gala Evening

DAY 02 SAVSEG Parallel Session

13:40 - 17:10 Certification Requirements for Export: SAVSEG (South African Veterinary Semen and Embryo Group). *More information to follow*

DAY 03 | 22 September

07:00 Registration
07:30 Opportunities to Improve Mastitis Control, Antimicrobial Stewardship and Farmer Engagement - *Dr Scott McDougall* *(sponsored by Ceva)*
08:15 The Use of Technology in the Feedlot - *Dr Calvin Booker* *(sponsored by Zoetis)*
09:00 Product Promotion: OBP
09:15 Certification of Beef Calves for the Feedlots - *Dr Danie Odendaal*
09:45 Tea
10:15 Product Promotion: Zoetis
10:30 Debunking the Myths About Livestock's Environmental Impact - *Dr Frank Mitloehner*
11:05 BRD Treatment Failure in Feedlots - *Dr Calvin Booker* *(sponsored by Zoetis)*
11:50 What is Food for Cattle is Good for Producers - *Prof MP Da Costa*
12:25 Lunch
13:25 Equine Colic for the Rural Practitioner - *Dr Arnold Mahne*
14:00 Rift Valley Fever - *Dr Sello Maboe (OBP)*
14:35 Semi-intensive Sheep Production and Nutrition - *Mr Joubert Nolte (Meadow)*
15:10 Tea
15:25 Product Promotion: TBC
15:40 Paratyphoid in Cattle - *Dr Maryke Henton*
15:55 TBA - *Dr Kenneth Botha (Barnlab)*
16:30 Close of Congress (Lucky draw winners)

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More information to follow. Programme and dates are subject to change