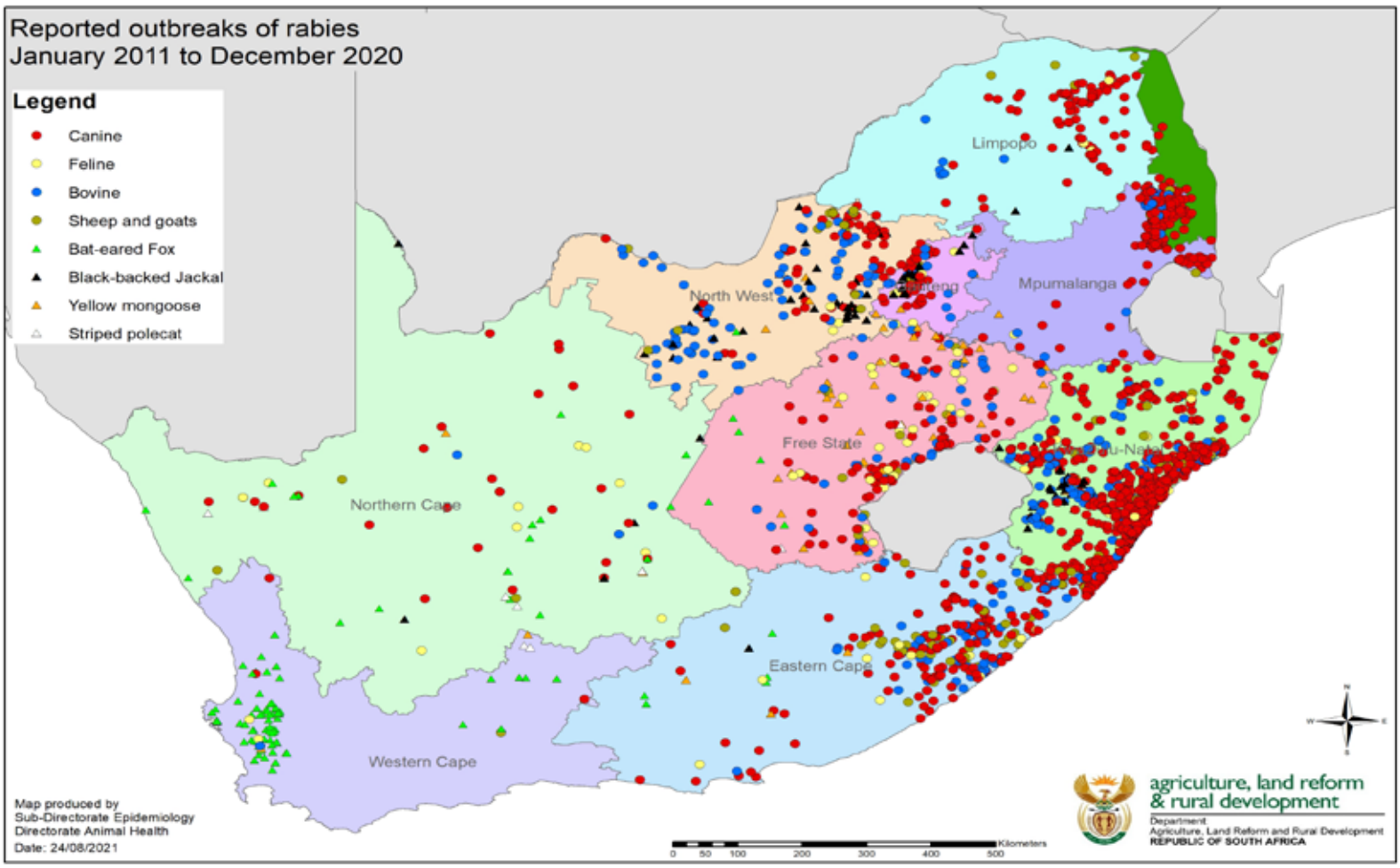
VET nuus·news

September 2021

The Monthly Magazine of the SOUTH AFRICAN VETERINARY ASSOCIATION
Die Maandblad van die SUID-AFRIKAANSE VETERINÊRE VERENIGING



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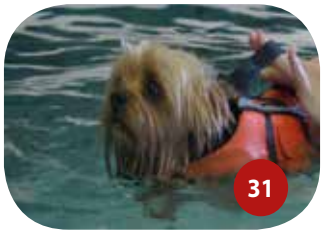
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Dear Colleagues,



Leon de Bruyn

As you read this spring will be upon us with all its signs of nature`s rejuvenation. It is also a season of renewal for our SAVA magazine as we welcome our new VetNews Editor, Mrs Andriette van der Merwe. We truly appreciate Andriette taking on this important role. We can be sure that incoming SAVA President Col Dr Paul van der Merwe will have his Presidential message for VetNews in on time to avoid adverse repercussions at home from his spouse!

We would again like to thank outgoing Editor Dr Paul van Dam for his efforts and service over the years. We acknowledge that it can be an arduous task extracting contributions from veterinarians and admire Paul`s dedication.

It has been a busy meeting time. SAVA MD Gert Steyn and I attended a late-night virtual meet and greet session hosted by the Canadian Veterinary Medical Association (CVMA). This served as a good warm-up for our International Veterinary Officers Convention (IVOC) meeting to be hosted by the New Zealand Vet Association (NZVA) late night and early morning 1st and 2nd September. I will give you feedback on this meeting in my October message.

We held our first SAVA FinCo 2022 budget meeting as well as an ExCo Meeting on the 18th of August where we welcomed new Finance Director Dr Tom Spencer onto both the Finance and Executive Committees. We are pleased to inform you that the Association and its subsidiaries have recovered well from the financial challenges brought on by the Covid-19 Pandemic, and the outlook for 2022 is positive. We must express our gratitude for the efforts of SAVA Accountant Ms Susan Heine, Bookkeeper Sonja Ludick and MD Gert for keeping the SAVA Finances on such a steady footing. SAVA President-Elect Col Dr Paul and I then attended a virtual NAHF-DALRRD meeting on the 19th of August. We seem to be making progress in containing the HPAI and ASF outbreaks. The continuing FMD and Rabies outbreaks are of particular concern. Hopefully, we can create more awareness running up to World Rabies Day to increase vaccination and help prevent this terrible deadly but preventable disease. We also discussed the protocol related to the long-range shipping of livestock. We have renewed concerns regarding the welfare of small stock shipped to the Middle East for slaughter following revelations of shipped animals being loaded into vehicle boots in over 40 degrees heat, rather than being transported to the abattoir as promised by the shipping companies in their secure closed-loop claims! The SAVA Board and AEWC will continue to engage with DALRRD, NSPCA and the LWCC to fight for the health and welfare rights of our livestock as well as control and restrict this practice as much as possible. SAVA will soon nominate a member to represent us on the LWCC as a replacement for Dr Deryn Petty who has stepped down. Gert, Paul and I then attended the SAVF AGM and meeting on the 21st of August.

SAVA EXCO aims to set up an Animal Health Committee as part of the Future Strategic Alignment plan presented to the Board and FedCo by President-Elect Paul. We want the Chair to represent SAVA at the NAHF and then committee members from the Branches to represent at the Provincial AH Fora. We will be presenting this to Fedco for approval and nominations.

The great news is that SAVA and RuVASA stalwart, Dr Faffa Malan had recovered enough to attend both FinCo and the NAHF meeting. Thank you to all who prayed for Faffa`s miraculous recovery.

Of some concern is the recent resignation of 4 more SAVC councillors. We need to respect that the SAVC is an independent statutory body and that it is not our mandate to become involved in internal Council matters. We do however have a responsibility to act in the interests of our members, who make up the bulk of the registrees. I have engaged with the SAVC President and Registrar to offer our support. We appreciate the efforts and dedication of our SAVA representative on the SAVC, Dr Brendan Tindall, as they navigate these turbulent waters. The call for nominations of replacement SAVC councillors has gone out. This is where the registrees can make their voice heard. Recent SAVC elections have been poorly supported. Nevertheless, it is up to the members of the profession to nominate and vote for, the candidates they believe will be best suited to serve on Council.

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 specifically tailored information from SAVA, as well as optimize 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.

Thank you to the VetHouse staff, my Board of Directors, the Groups and Branches as well as the Committees with their members who dedicate so much time and effort to serve the Association and the Profession. We must pray steadfastly to our ever faithful Lord for His continued protection and provision as well as wisdom to guide us in our endeavours.

Yours in rejuvenation,

Leon



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Andriette van der Merwe

Editor's notes / Redakteurs notas

A Beast of a different kind



How do you eat an elephant? Bit by bit, they say, but where do I start. First of all, I would like to thank SAVA for putting their confidence in me by allowing me near this elephant.

Being married to a veterinarian for more than 30 years, and having one as a daughter, I earned my T-shirt stating "Very little scares me, I am the mom of an OP student". I am privileged to work with this team and all the contributors to VetNuus·News

Ek wil graag vir Dr. Paul v Dam baie geluk sê met 187 uitgawes. Dit was werklik 'n onbaatsugtige diens aan Veeartseny, en 'n reuse olifant om te verorber. Ek hoop dat ek die tydskrif se standaard net so hoog sal kan hou. Baie dankie vir die fondasie waarop ek kan bou.

The veterinary profession has always been close to my heart. I even wanted to enrol at Onderstepoort but did the better alternative and that was to marry a Vet.

A lifetime of stories has been collected as any Vet's wife would tell you. When my daughter decided (right after birth) to study at the Republic of Onderstepoort a whole new world opened up for me. I am sure a lot of little secrets exists between her and her dad, things that I may not want to know.

My liefde vir diere en die veld het reeds op 'n jong ouderdom posgevat en was ek as stadsjapie meer op kampe en plase as by die huis. My ouers het my Goggabie genoem omdat ek gedurig met een of ander gogga besig was. Ek is steeds baie lief vir die veld en by ons huis in Hoedspruit kry ek geleenthede wat baie min beskore is.

A warm thank you to all contributors to this month's edition. You helped to make my landing a little softer. May anybody who would like to contribute, please not hesitate. It takes a whole community to publish a magazine. All the best for September which is also Rabies month. May we all contribute to the WHO's 30-year plan of Zero Deaths, one vaccination at a time.. On a lighter note, do enjoy the Ruptured Spleen's take on the Olympics, may you never see those symbols in the same light.

Andriette

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Aileen Pypers: 072 599 8737, aileen.vet@gmail.com
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Image: Global Alliance for Rabies Control (https://rabiesalliance.org)

Rabies: Facts, not Fear

On 28 September, we will be celebrating World Rabies Day with the theme "Rabies: Facts, not Fear". This theme is well-timed, as the global COVID-19 pandemic has raised many general doubts and misconceptions about diseases, their spread and vaccination. For rabies, fears, misconceptions and misinformation about the disease and its prevention have been evident throughout the ages. This year's theme focuses on sharing facts about rabies to counter myths and misinformation that lead to fear. Knowledge is power and we can all play our part in creating awareness about rabies and its prevention.



Image: Global Alliance for Rabies Control (https://rabiesalliance.org)

Rabies in animals

Rabies is a controlled animal disease in terms of the Animal Diseases Act, 1984 (Act No. 35 of 1984) and any suspected case in domestic animals or wildlife must be immediately reported to the local State Veterinary Office. The State Veterinary Officials play a key role in the verification of the disease, guiding concerning other exposed animals and their fate, as well as driving vaccination campaigns in outbreak areas. If you do not yet know your local State Veterinarian or Animal Health Technician, ensure that you become acquainted and save their contact details.

Rabies is caused by a Lyssavirus that can be transmitted through saliva or nervous system tissues of an infected mammal. Within Southern Africa, the majority of cases are caused by rabies virus and there are two rabies virus biotypes (strains): The canid-biotype which cycles in carnivores of the family Canidae (dogs, jackals and bat-eared foxes) and the mongoose-biotype which cycles in carnivores of the family Herpestidae (mainly the yellow mongoose and slender mongoose). Rabies related lyssaviruses occur in bats but cases are extremely rare and the majority of our human rabies cases are due to rabid domestic dog exposures.

The incubation period typically ranges between 2 and 3 months, but 2 weeks and up to 6 years have been reported. This period depends on the site of infliction, the amount of virus introduced and the virus strain. After the rabies virus enters another mammal (through wounds or mucous membranes), it travels via the peripheral nervous system to the central nervous system causing encephalitis, which showcases as neurological symptoms and imminent death. Once clinical signs are present, there is no cure for the disease in animals or humans.

Clinical signs in infected animals typically include abnormal behaviour or changes in behaviour (e.g. wild animals lose their fear of humans, domestic animals can become aggressive or placid), salivation (drooling or foam at the mouth), incoordination, paralysis, inability to swallow or drink water, hydrophobia, vocalisation, "bone-in-throat" syndrome, etc. Suspect rabies cases with no or inadequate vaccination history are euthanised and brain samples submitted in glycerol-saline solution for fluorescent antibody testing (FAT). PPE (gloves, facemask, eye protection, overalls) should be worn when collecting brain samples. South Africa has two South African National Accreditation System (SANAS) accredited

and national Department of Agriculture, Land Reform and Rural Development (DALRRD) approved laboratories that test for rabies, namely the ARC-Onderstepoort Veterinary Research (ARC-OVR) and Allerton Provincial Veterinary laboratory.

In-contact animals have to be isolated and assessed to determine their vaccination status, the potential of virus exposure and the potential risk of having become infected. The state veterinarian may order further quarantine and vaccinate a low-risk contact or may order euthanasia of a high-risk unvaccinated contact.





Images: "Rabies: Guide for the Medical, Veterinary and allied Professions – 2nd edition, 2010"

Vaccination of cats and dogs

Vaccination of dogs and cats against rabies is legislated as compulsory in Table 2 of the Animal Diseases Regulations (R.2026 of 1986):

- The first rabies vaccine should be administered when the dog or cat is at least 12 weeks (three months) old. A second booster vaccine must be administered within 12 months, but at least one month after the first vaccine. Thereafter, booster vaccination every three years is required. (In high-risk settings we strongly advise booster vaccinating annually).
- Dogs and cats younger than 12 weeks (three months) old may be vaccinated, but then you need to have them re-vaccinated at 12 weeks old and follow the booster guidelines as above.
- Older dogs and cats that have never been vaccinated before can receive their first rabies vaccination at any age and they also require a booster vaccine between one to 12 months after the first vaccine. Thereafter, follow the booster guidelines as above.

Rabies exposure in humans – what to advise

Clinical rabies disease in humans is a Category 1 Notifiable Medical Condition under the National Health Act (Act No. 61 of 2003), which requires immediate reporting to the health authorities. People that have been bitten, scratched or licked (on wounds or mucous membranes) by a suspect rabid animal (not notifiable, but bite registers are kept at health care facilities), must wash the wound/area thoroughly with soap and running water for 5-10 minutes, and immediately seek post-exposure prophylaxis (PEP) treatment at their nearest clinic or hospital to prevent rabies virus infection. The attending medical officer will conduct a risk assessment to determine the category of exposure based on the type of contact with the animal (lick, scratch, bite), the situation that led to contact (e.g. provoked or unprovoked attack, known or unknown animal) and the damage inflicted (skin breached or not). PEP includes a series of human rabies vaccinations and potentially rabies-immunoglobulin therapy if the skin was breached, and any blood is visible. For more information on how to prevent human rabies, visit www.nicd.ac.za.

The current situation in South Africa

In 2019, 257 rabies cases in animals had been officially reported to DALRRD, compared to 294 cases in 2020. **In 2021, up to the end of July, just over 330 rabies positive laboratory results have been recorded in animals, which amounts to roughly 1.5 cases detected per day.** Reported figures will be an under-representation of the true number of cases, as not all outbreaks are detected, not all carcasses are sampled and not all results are always effectively reported to and through the state veterinary services channel.

In 2019, ten laboratory-confirmed and four probable human rabies cases had been reported to the National Department of Health, compared to seven laboratory-confirmed and three probable cases in 2020. **In 2021, up to the end of July, six laboratory-confirmed human rabies cases have been reported (three from Limpopo, two from KwaZulu-Natal and one from Eastern Cape provinces), which relates roughly to a case confirmed per month.**

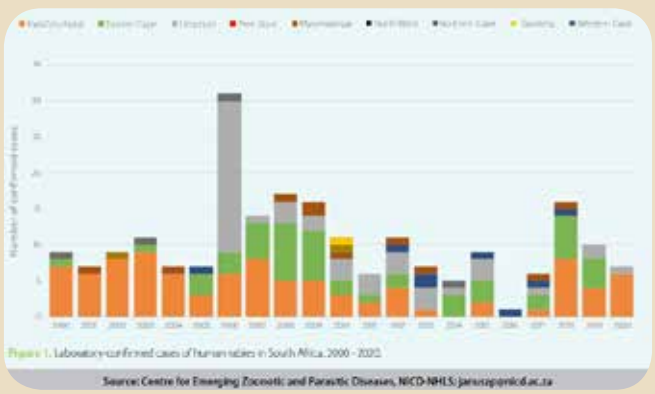


Image: Centre for Emerging Zoonotic and Parasitic Diseases, NICD

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Animal rabies occurs in all nine provinces, but canine rabies cycles are predominantly focussed in the eastern parts of the country (Limpopo, Mpumalanga, KwaZulu-Natal, Eastern Cape provinces and the eastern Free State border with Lesotho). Some areas in these provinces have highly concentrated and free-roaming dog populations, which exacerbates the spread of the disease if these dog populations are not adequately vaccinated.

The map below shows the distribution of officially reported rabies cases per species between 2011-2020:

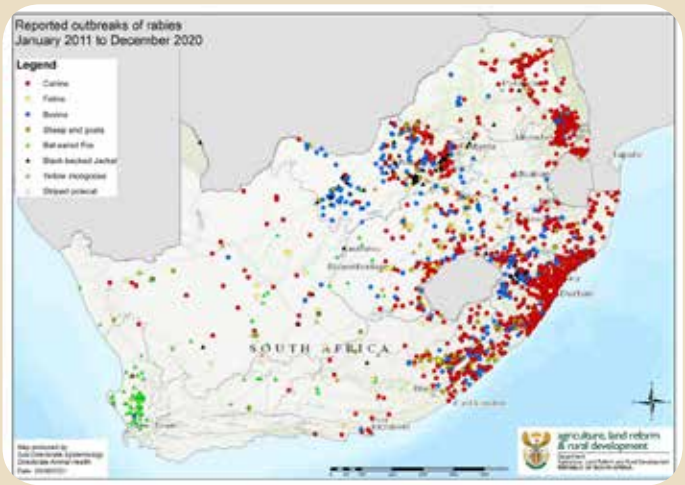


Image: DALRRD, Directorate Animal Health, Sub-Directorate Epidemiology

"Zero by 30"

Globally, every nine minutes, a person dies because of rabies and 99% of human cases are caused by exposure to rabid dogs. "Zero by 30" is the global strategic plan to eliminate dog-mediated human rabies deaths by 2030 and is a model for One Health collaboration. It is endorsed by the World Health Organization (WHO), the World Organisation for Animal Health (OIE), the Food and Agriculture Organization of the United Nations (FAO) and the Global Alliance for Rabies Control (GARC). Dog-mediated human rabies is 100% preventable and can be achieved through creating rabies awareness, adequate vaccination coverage of dog populations (70% coverage) and access to affordable post-exposure prophylaxis for people.

In line with this initiative, South Africa has developed a "National Strategy for the Elimination of Canine Mediated Human Rabies in South Africa (2019-2030)". Although rabies control is implemented across the country, the strategy strongly focuses on adequate vaccination of high-risk dog populations where canine rabies is prominent, which includes areas in the Limpopo, Mpumalanga, KwaZulu-Natal, Eastern Cape and Free State provinces.

Effective implementation will strongly rely on a collaborative approach between all relevant stakeholder sectors. If this strategy can be effectively and sustainably implemented, dog-mediated human rabies cases may well be a thing of the past.

Whenever possible, rabies awareness needs to be created to empower people to protect themselves and each other. People should be advised not to approach or attempt to handle wildlife or animals that are not known to them. Dog and cat owners should be continuously reminded how important it is to ensure their pets are adequately vaccinated. People should also be cautioned against bringing stray unvaccinated dogs and cats home from high-risk areas. Useful awareness resources are available at:

- https://rabiesalliance.org/world-rabies-day/event-resources
- https://www.oie.int/en/disease/rabies/
- https://www.dalrrd.gov.za/Branches/Agricultural-Production-Health-Food-Safety/Animal-Health/information/pamphlets/pamphlet-main

For further reading on rabies in animals and humans, please consult the very comprehensive "Rabies: Guide for the Medical, Veterinary and for allied Professions – 2nd edition, 2010" available at:

https://www.nicd.ac.za/diseases-a-z-index/rabies/



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African Swine Fever – Global threat, local challenge

Dr Caraleigh Stander, CS Vet.



The phone call reporting many pigs suddenly dying, then the post-mortem reflecting petechiae and haemorrhages from multiple organs. It is enough to strike fear in the hardiest of veterinarian and farmer hearts.

African Swine Fever is by no means novel, but the way it is spreading and now being managed certainly is.

The provenance of the disease appears to be in the Eastern part of Africa, with studies from Kenya showing the introduction of the virus from the traditional hosts of warthogs and bushpigs to domestic pigs in the early 1900s. The virus had a slow but steady spread down the continent and then to European countries from the 1950s and '60s.

A notable outbreak in Portugal in 1957 lead to the production of a vaccine which unfortunately resulted in the emergence of less virulent strains causing chronic infections in both Portugal and Spain. There was however some value in the investigations done to produce this vaccine as it was discovered that the *Argasid* ticks in the burrows of warthogs can carry and transmit the virus.

Throughout the last part of the 20th century, ASF remained a constant but relatively quiet bother, but as is evident in headlines across the globe, it has devastated the pig industry slowly and steadily.



The Pork industry in China has lost 25% of its breeding herd in 2020 and Cameroon has been overcome with the virus with many other countries hot on their heels.

About the Virus

The icosahedral African Swine Fever virus is the only member of the *Asfarviridae* family. It is also the only known Arthropod-borne (Arbovirus) with a dsDNA genome. Using the ASFV major capsid protein p72, twenty-four ASFV genotypes have been identified as of 2019. Genotypes I and II have been isolated in the South African outbreaks from April 2019 until the end of May 2021.

The virus is enveloped, which may give one the impression that it is sensitive to desiccation and heat. However, the hardy ASFV has been observed to survive for 18 months at 23 °C and a month at 37 °C. Just as concerning is the ability of the virus to survive in manure for almost 2 weeks, even at wide pH ranges from 3.9 to 13.4. From here it is easy to understand the worry of viral persistence in cooked and processed hams and other cuts of pork.

The envelope does however have a gap, in that it is sensitive to soaps and detergents, particularly when mixed with hot water.

The spread of ASFV

Previous outbreaks were limited to the 'controlled' zone, but from April 2019 to May 2021, there have been 89 outbreaks outside of this area. The majority have occurred in Gauteng (36 outbreaks) and the Western Cape (20 outbreaks).

The cases have also varied across small subsistence farmers to large commercial farms.

The traditional domestic cycle so widely described in literature, where eyeless tampans keep the virus circulating in warthogs and bushpigs (which do not show symptoms), is now only the predominant reservoir for areas where these wild suids and domestic pigs are very likely to

meet. It is also noteworthy that some of the infected *Argasid* ticks have been found outside of the control zone. Other biting insects cannot be discredited, however, only the stable fly, *Stomoxys calcitrans*, has been demonstrated to be able to transmit the virus for very short periods after feeding.

The more common and concerning method of spread is directly between domestic pigs through the transport of infected pigs across provinces, at auctions and where pigs are kept in more free-ranging conditions. Add to this higher pig densities than before, the uncontrolled slaughter of pigs near farming operations, poor biosecurity and feeding of swill or other waste products to survive the high price of commercial pig feed, and ASFV is sure to flourish.

Pathogenesis

The virus initially replicates in the pharyngeal tonsils and mandibular lymph nodes, regardless of if the spread to the pig was oronasal or parenteral. It is this first 48 hours in which pigs can shed the disease before becoming symptomatic. ASFV has a predilection for replicating in monocytes and macrophages, but the entry mechanism is still unclear with research and debates ongoing. Most research indicates receptor-mediated endocytosis, but this may not be the exclusive route.

After colonising the upper oronasal tract, the virus is spread haematogenously. ASFV has been shown to be highly associated with Erythrocytes. The virus suppresses the dying of the infected macrophage until replication is complete. Further suppression of the immune system is evident through lymphopaenia. This is as a result of the release of TNF-α and other interleukins leading to apoptosis of T- and B-lymphocytes. The cytokines are released when infected macrophages eventually die.

Once the macrophages are overcome, replication of the virus is observed in endothelial cells, glomerular mesangial cells, renal collecting duct epithelial cells, hepatocytes, neutrophils, and megakaryocytes.

The resultant DIC, increased vascular permeability and then thrombocytopaenia causes the overt clinical signs and post-mortem findings; pigs die of vascular or hypoxic shock with haemorrhages on multiple organs.

Diagnosis

High morbidity and mortality rates with the textbook lesions are certainly suggestive. The difficulty arises to differentiate the disease on post-mortem when pigs are kept in less than ideal conditions and sudden losses are common. There are also other organisms like *Actinobacillus pleuropneumoniae* and *Glaesserella parasuis* that commonly occur in South Africa which can paint a similar mortality and post-mortem picture. Septicaemia and shock of other aetiologies can also cause sudden mortalities and comparative clinical signs. Outside of South Africa, Classical Swine Fever and Porcine Reproductive and Respiratory Disease is an important differential.

PCR is the most common method of identifying ASFV on organs sampled and the ELISA test on serum is also frequently employed.

Biosecurity, Management and Control

As is commonly known, with no treatment or vaccine as well as being a controlled disease, the best method in controlling ASF is to avoid it.

Basic biosecurity is frequently advocated, but the concept must be properly understood and embraced by any pig owner or farming team. This would mean emphasising that visitors, management, and staff at



the piggery adhere to all measures without exceptions. The VPN 39 on Pig Compartments as well as the Pork 360 guidelines describe various strategies including proper fencing, showering, provision of farm only PPE, 'pig freedom' before entering, not allowing any pork or raw meat at the piggery, not feeding swill, vehicle restrictions and responsible sourcing of replacement stock, to name a few.

However, in more informal circumstances where resources are limited, certain biosecurity measures are not feasible or possible. In these cases, individuals must be assessed for which minimum measures would address the most prominent risks; supplying dedicated farm boots, the source of the farmer's animals, where they market to and the vehicles used, the proximity to other domestic pigs or wild suids, what basic perimeter can be set up and limiting visitors and other animals accessing the piggery.

For South Africa, warthogs and the small-scale pig keeper will not cease to exist, and therefore, our fear for facing and fighting against not only ASFV but other biosecurity preventable diseases is part and parcel of our industry.

As is evident in the news in South Africa and across the world, viruses are here to stay – whether ASF in pigs Covid in humans, these viruses can cause severe economic and emotional stress. Prevention and planning for disasters will be key to decreasing losses in future.

All photographs courtesy of Dr. Dorothea Mostert, CS Vet.

References

1. Anipedia, www.anipedia.org: JAW Coetzer and P Oberem (Directors) In: Infectious Diseases of Livestock, JAW Coetzer, GR Thomson, NJ Maclachlan and M-L Penrith (Editors). M-L Penrith, GR Thomson, ADS Bastos and EMC Etter, African swine fever, 2019.
2. Patton, D., 2021. Analysis: African swine fever inflicts renewed toll on northern China's hog herd. [online] U.S. Available at: <https://www.reuters.com/article/us-china-swinefever-resurgence-analysis-idUSKBN2BO5AV> [Accessed 29 June 2021].
3. Norbert Mwiine, F., Nkamwesiga, J., Ndekezi, C. and Ochwo, S., 2019. Molecular Characterization of African Swine Fever Viruses from Outbreaks in Peri-Urban Kampala, Uganda. Advances in Virology, 2019, pp.1-8.
4. Malogolovkin, A., Burmakina, G., Titov, I., Sereda, A., Gogin, A., Baryshnikova, E. and Kolbasov, D., 2015. Comparative Analysis of African Swine Fever Virus Genotypes and Serogroups. Emerging Infectious Diseases, [online] 21(2), pp.312-315. Available at: <http://Comparative Analysis of African Swine Fever Virus Genotypes and Serogroups> [Accessed 29 June 2021].
5. The Department of Agriculture, Land Reform and Rural Development, 2021. African swine fever outbreak and surveillance update report. DALRD, pp.2-5.



Acupuncture or Acupocus?

by Dr. Heather Nixon BVSc

Being a Locum at various practices taught me that there are often different ways to "skin a cat" as it were. Keeping an open mind and discovering alternatives, when the "norm" did not yield results or had too many side effects, is what led me to acupuncture.

Luckily, a recognised certification course in acupuncture run by the Chi Institute of Chinese Medicine in America became accessible in South Africa.

So, what is acupuncture?

There are two different ways of looking at it. The more "Eastern" approach describes inter-connected energy channels (called meridians) running throughout the body keeping the organs, as well as the flow of energy, blood, heating, and cooling, in balance. The "Western" perspective aligns most of these channels with nerve pathways and blood vessels. Specific points along the meridians which we use as acupuncture points very often correlate anatomically with a high density of free nerve endings, arterioles, lymphatic vessels, and mast cells. These points also seem to have decreased electrical resistance and increased electrical conductivity. Stimulation of an acupuncture point leads to local reaction, spinal cord reaction, and brainstem effects. For more detail on physiological and biochemical mechanisms involved please refer to "Traditional Chinese Veterinary Medicine, Fundamental Principles, 2nd Edition" by Huisheng Xie and Vanessa Preast.

Electro-acupuncture is a more advanced technique whereby a special machine with leads is attached to the acupuncture needles at specifically chosen acupuncture points. An electrical impulse is applied at specific frequencies depending on the desired outcome.

There has been a lot of research into this modality over the last few years and clinical trials have shown positive results. Studies have shown that acupuncture, especially electro-acupuncture, can cause the release of certain hormones such as serotonin or endorphins. These may influence issues such as pain or aid regeneration of nerve fibres.

When there is imbalance in the body, there is disease which can be manifested as various conditions. Some of the basic effects of acupuncture which can aid us in therapy include:

- Pain relief
- Stimulating or suppressing the nervous system
- Immunity regulation

As the Minds of Medicine delve more into this ancient art of healing we are learning more about how and why this process may work at a scientific level.

I have personally been implementing an integrated approach for over a year now and am very impressed with the results:

- Previously unstable epileptics - seizure free for months
- Paralysed dogs - running around happily
- Downer cows which seemed hopeless - up and in calf
- Extremely lame animals despite medicine - running sound

To name but a few. But my most amazing tale is of a Daschund, paralysed for 2 and ½ years secondary to IVDD. He is now able to stand and walk a few steps and is a much happier dog. His treatment will take a lot longer as his condition is extremely chronic. But the progress is remarkable!

Obviously, acupuncture has its limitations as with any modality. And not everybody needs to rush and learn yet a new skill, but in the best interest of our clients and patients, open yourselves to the possibility of referring those cases that could benefit from "something else".

In conclusion, ACUPUNCTURE IS DEFINITELY NOT HOCUS POCUS!

References:

"Traditional Chinese Veterinary Medicine, Fundamental Principles, 2nd Edition" by Huisheng Xie and Vanessa Preast

"Xie's Veterinary Acupuncture", by Huisheng Xie

"Mixed Practice Acupuncture Training Program" by Chi Institute of Chinese Medicine.



Use of Ultrasound in Diagnosis and Treatment of Subcutaneous Foreign Bodies

By Dr Morné de Wet, Cottage Vet Clinic (drmorne@cottagevet.co.za), a division of the EberVet Petcare Group

Ultrasound is often seen as an imaging modality mainly for the abdomen. However, in recent years it has gained traction in small animals for imaging the musculoskeletal system, eyes, and the focus of this article, finding subcutaneous foreign bodies.

Subcutaneous foreign bodies are often encountered in small animals and can be difficult to diagnose clinically and from an imaging perspective (4). This is often complicated by delayed time of onset of clinical signs, vague clinical signs, and the ability of these foreign bodies to migrate (4,6).

These foreign bodies can range from the ubiquitous grass awns and thorns to glass and even bullets (2,4,5). Complications from migrating foreign bodies can include abscesses, cellulitis, persistent draining tracts, pyogranulomatous inflammation and even osteomyelitis (1-6). Uncommon complications can be serious and include sepsis, disseminated intravascular coagulation and even endocarditis (3).

Thus, diagnosis and appropriate treatment are important. Ultrasound can be a useful tool in diagnosing and treating these subcutaneous foreign bodies (1-6).

Case example

A young male German Shorthaired Pointer presented after repeated swelling of the dorsolateral aspect of the right carpus causing variable, intermittent lameness of approximately two months duration. Initial treatment involved empirical antibiotics and non-steroidal anti-inflammatory drugs (NSAID).

The response was incomplete, variable and only temporary. Radiographs did not show any abnormalities. Only a small soft tissue swelling was palpable, which appeared intermittently (Figure 1).



Very mild non-painful soft tissue swelling of the dorsolateral metacarpus.



Ultrasound image of the swelling in Figure 1 scanning in the longitudinal plane. A ca 1 cm irregular to a spindle-shaped hyperechoic structure is seen in the subcutaneous tissue between the extensor tendon (hyperechoic line) and the probe.



Ultrasound image of the structure in Figure 2 scanned transversely. A small round hyperechoic structure can be seen in the subcutaneous tissue between the extensor tendons and the probe.

Musculoskeletal ultrasound using a 14 MHz linear probe was used to evaluate the carpus.

A single hyperechoic irregular linear structure was seen in the subcutaneous tissue (Figure 2 and 3).

A small incision was made, and the grass seed was removed under ultrasound guidance (Figure 4). Flushing of the area with sterile physiological saline and discharged with only NSAID resulted in complete resolution.

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Picture of grass seed that was removed under ultrasound guidance, with only a small incision required.



Case discussion

This case illustrates how ultrasound provided a definitive diagnosis and aided in the complete removal of the foreign body with minimal tissue destruction. Foreign body surgery can often feel like looking for a needle in a haystack and result in a large amount of collateral damage to surrounding tissue. The use of ultrasound significantly reduces tissue damage, which decreases postoperative morbidity and speeds recovery. I have, on occasion, used ultrasound to diagnose and remove glass, bullets, broken porcupine quills, and grass seed remnants from previously surgically explored areas. I have even used ultrasound to locate and guide the removal of migrated Kirshner wires after orthopaedic procedures.

An additional advantage of using ultrasound is also the ability to rule out foreign bodies. Most foreign bodies have a different acoustic impedance compared to soft tissue which allows easy identification. Thus, ultrasound can be used to exclude or reduce the likelihood of a foreign body as a differential when evaluating lesions with the associated clinical signs. I find this particularly useful in evaluating small soft tissue swellings of the distal extremities in small animals. Using a high-frequency linear probe, a foreign body can be excluded, and the tendons, ligaments and muscle bundles can be evaluated. This has spared many patients from unnecessary surgery searching for a foreign body, where the problem was associated with the pathology of the flexor tendons.

Some practical tips I have found to help with the procedure

- Use the appropriate probe. A linear array, high-frequency probe is ideal for superficial areas such as distal extremities. This also allows for the examination of tendons and muscle bellies. Convex probes can also be used if linear probes are not available as long as high frequency and a shallow depth are selected whilst scanning.
- Area preparation. Preparing the area is extremely important. Clipping widely (and usually wider than you think) facilitates visualisation from different angles and using sufficient ultrasound gel.
- Sonographer preparation. Knowledge of anatomy and familiarisation with the equipment are both important factors. However, as with any ultrasound skill, practice, practice, practice.

Ultrasound is a very useful tool in the diagnosis and exploration of suspected subcutaneous foreign bodies. It can lead to faster diagnosis and less traumatic removal of foreign bodies and can save many patients from unnecessary surgical intervention which leads to happier patients and clients. V

1. *Armbrust, L.J. et al, (2003) Ultrasonographic diagnosis of foreign bodies associated with chronic draining tracts and abscesses in dogs. Vet. Radiol. Ultrasound. 44:66-70*
2. *Birettoni, F., et al, (2017) Preoperative and intraoperative ultrasound aids removal of migrating plant material causing iliopsoas myositis via ventral midline laparotomy: A study of 22 dogs. Acta. Vet. Scand. 59:1-9.*
3. *Brisson, B.A, et al, (2004) Ultrasonographic diagnosis of septic arthritis secondary to porcupine quill migration in a dog. J. Am. Vet. Med. Assoc. 224:1467-1470*
4. *McHaney, A.M et al, (2019) Use of Ultrasound in the diagnosis of soft tissue foreign bodies. Case report and review the literature. JIVM. 74:57-62*
5. *Ober,C.P. et al, (2008) Comparison of ultrasound, computed tomography, and magnetic resonance imaging in detection of acute wooden foreign bodies in the canine manus. Vet. Radiol. Ultrasound. 49:411-418.*
6. *Staudte, K.L., et al, (2004) Use of ultrasonography to facilitate surgical removal of non-enteric foreign bodies in 17 dogs. J. Small Anim. Pract. 45:395-400.*



The Valley Farm Animal Hospital haemodialysis team lead by Dr Gareth Zeiler. From left to right: Dr Marinell Breytenbach, Dr Gareth Zeiler, Sr Stephanie Rotherham, Sr Bianca Steyn and Dr Anthea Michaletos

Valley Farm Animal Hospital is the first hospital to offer dedicated renal replacement therapy in dogs

Renal replacement therapy, also known as renal dialysis or haemodialysis, has been available as a therapy for dogs and cats since the 1980s. This therapy has been available in academic hospitals and referral practices in northern America and Europe where there is a team of dedicated personnel specifically trained in this extracorporeal therapy. In Africa, perceived cost constraints and no specialisation in emergency and critical care have likely limited the progress of making this treatment available to veterinarians.

Sporadic cases, over the last two decades, where dogs have been taken to human renal dialysis centres for treatment, have been anecdotally mentioned. However, logistics and availability of time at these centres limit its routine use in veterinary medicine – that is until now. Valley Farm Animal Hospital would like to introduce renal replacement therapy as a treatment option for dogs.

Renal replacement therapy, very briefly, involves the removal of blood from the patient which flows within an extracorporeal circuit, through a dialyser and then returned to the patient. The dialyser acts as a kidney and assumes the function of removing toxins that would otherwise have been removed by a functional kidney. Many renal toxins have different molecular weights. Renal replacement therapy targets the removal of small and medium-size toxins that are less than 40 kDa in size which is smaller than albumin (68 kDa). It is not practical to measure all renal toxins during therapy, thus blood urea nitrogen (BUN) is the toxin most often used to monitor therapy adequacy. It is assumed that if BUN is removed effectively, then the other renal toxins should also be removed. Dogs that are suffering from acute kidney injury and have oliguria or anuria could be unresponsive to fluid and diuretic therapy. If there is no response to initial therapy within the first 12 hours, then these patients are at a high risk of mortality. These patients require intermittent renal replacement therapy urgently.

This therapy not only rids the body of toxins but assists with balancing the blood volume and acid-base status. Dogs can die from an acute kidney injury before the renal tissue has time to heal, thus this therapy buys time for healing, giving the kidneys a chance to return to adequate function. These patients require intermittent renal replacement therapy for up to 2 weeks. Therapy for chronic renal failure can also be done, but this would require a dedicated and discerning dog owner to commit to, at least, twice or thrice weekly treatments. Intermittent renal replacement therapy is not limited to the management of a patient with acute kidney injury but can be used in patients, for example, with hypervolaemia, immune-mediated diseases and acute intoxication.

Hypervolaemia can develop in dogs with kidney injury or failure and heart failure, among other less frequently diagnosed disease processes. The common clinical manifestation of hypervolaemia is distended jugular veins, dyspnoea and cavity effusions. Medical therapy includes the use of diuretics, however, patients that do not respond to diuretic therapy are in danger of developing pulmonary oedema, which could be life-threatening.

The dialysis machine can be used to actively remove the excess fluid volume within minutes in an attempt to mitigate the development of life-threatening pulmonary oedema. The dialysis machine does not deplete electrolytes, glucose or albumin concentrations and allows the patient a chance to stabilise during a life-threatening event like pulmonary oedema.

After treatment, a cardiac patient with congestive heart failure might require adjustments to chronic drug therapy to minimize the risk of developing pulmonary oedema again.

Immune-mediated diseases, like immune-mediated thrombocytopaenia (IMTP) develops for several reasons and is treated using immune-suppressive doses of steroids and drugs like azathioprine and treating an underlying cause (usually tickborne diseases in dogs, or cancer). Sometimes, IMPT occurs as an isolated event and once medically managed, the dog rarely develops another episode. However, dogs that have repeated events or who do not respond with an increase in thrombocytes within 12 hours of medical management are at risk of mortality. These patients could benefit from plasma exchange therapy. In this therapy, the patient's blood is sent through the extracorporeal circuit of the dialysis machine and the plasma is sieved through a special filter and discarded. Either fresh frozen plasma or an isotonic crystalloid is returned to the patient to maintain their blood volume. Ridding the patient from its plasma allows them an opportunity to gain control of the response of their immune system and to prevent further destruction of their thrombocytes.

Acute intoxications could be accidental (dogs eating medicinal or illicit recreational drugs etc.) or malicious (aldicarb etc.). The first treatment option is to decontaminate (if possible) and administer an intravenous bolus of lipid emulsion and perhaps starting activated charcoal therapy. When these interventions do not work and the patient does not improve then renal dialysis using either a dialyser alone or with a charcoal filter should be considered as an emergent therapy. Some intoxications, such as anti-freeze ingestion, do not respond well to medical management and renal dialysis should be considered as a first option treatment.

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Dr Anthea Michaletos discussing the treatment plan with Mary-Ann Burger while Sr Stephanie Rotherham manages the catheter and patient.

In veterinary medicine, renal dialysis has been progressing over decades and it should be viewed as a treatment option for dogs with acute kidney injury, hypervolaemia, IMPT and acute intoxications unresponsive to initial medical management. We have found the industry to be very keen on entering the veterinary market and it is an exciting time to see if South Africa will be able to build on and develop renal dialysis centres in the various provinces in South Africa.

The team at Nipro (https://www.linkedin.com/company/nipro-europe-nv), Ms Mary-Ann Burger and Ms Busisiwe Hlanga have been instrumental in the process of setting up our dialysis unit. The required step to follow is to identify a dedicated team of veterinarians and veterinary nurses that wish to offer this therapy.

Once a team is identified, then they would need to undergo advanced training in this therapy and the dialysis machine. To date, Valley Farm Animal Hospital is up and running with South Africa's first dedicated renal dialysis machine and the team headed up by Dr Gareth Zeiler are accepting referrals for renal replacement therapy and plasma exchange.

Textbox 1 shows the type of dogs we can treat and what criteria is required for referrals. Any enquiries can be addressed to one of our renal dialysis therapy veterinarians, Marinell Breytenbach or Anthea Michaletos for case referral advice and advance training.

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NIPRO MEDICAL EUROPE

Indication for therapy in dogs

Signalment

- >10 kg of any age dog and breed

Acute kidney failure or injury

- Clinical manifestation of uraemia with raised urea (> 35 mmol/L; > 100 mg/dL) and creatinine (> 700 umol/L; > 8 mg/dL) unresponsive to initial medical therapy over 12 to 24 hours
- Life threatening disturbances in electrolyte concentrations
- Hyperkalaemia (> 5 mmol/L)
- Hyperphosphatemia (> 2 mmol/L)
- Hyponatremia (< 130 mmol/L)
- Urine production < 0.5 mL/kg/hour unresponsive to fluid and diuretic therapy over 12 hours.
- Hypervolaemia, hypertension (systolic arterial blood pressure > 160 mmHg) with possible pulmonary oedema

Chronic renal failure

- Only for decerning and dedicated clients that can commit to twice or thrice weekly therapy

Heart failure

- Early or late congestive heart failure with mild to severe pulmonary oedema and unresponsive to diuretic therapy

Immune mediated diseases

- Diagnosed immune mediated thrombocytopaenia where thrombocyte counts do not increase with medical management over 24 hours; or persistent thrombocyte count of < 40 000/uL

Acute poisoning or accidental drug overdose

- Antifreeze ingestion, although rare in South Africa, is an urgent case that should be treated within hours of suspected or confirmed diagnosis
- Any other intoxication unresponsive to traditional therapy of decontamination, intravenous lipid emulsion and activate charcoal therapy

Textbox 1

Indication for renal replacement therapy in dogs that are currently available in South Africa.

Reducing the Threat of Rift Valley Fever (RVF) through Ecology, Epidemiology and Socio-Economics Year 1 Report



Reducing the Threat of Rift Valley Fever (RVF) through Ecology, Epidemiology and Socio-Economics (2019-2024) is a new project coordinated by the National Institute for Communicable Diseases, the University of Pretoria and EcoHealth Alliance.

Expanding on the 5-year **Understanding Rift Valley Fever in the Republic of South Africa** project (2014-2019), combined, this work represents the most comprehensive investigation of RVF ever conducted to date. We have expanded our diverse group of partners from governmental, non-governmental, academic, and private organisations, both domestic and international, to investigate the impacts of the RVF virus (RVFV) and improve the capacity to predict local outbreaks. Specifically, the project is investigating the socio-economic impact of RVF at the individual and national levels and will integrate our previous results with satellite-collected weather data to develop an early warning system. We are also continuing our important long-term investigations in the Free State of i) the RVFV infection rate in sheep between outbreaks, ii) how long antibodies persist in sheep following vaccination with Smith burn vaccine and iii) understanding seasonal dynamics in mosquito populations. Finally, we have expanded our work into north-eastern KwaZulu-Natal (KZN), where only a few small RVF outbreaks have previously been reported, but our team members have found evidence that RVFV is silently circulating in local domestic ruminants.

This One Health project is working toward examining the economic cost of RVF across sectors and cost-effectively preventing future RVF outbreaks. The project covers a 40,000 km^2 region of the Free State and Northern Cape, South Africa, which includes the areas hardest hit during the 2010-2011 RVF outbreak. We are also working in a 1,000 km2 region of northeastern KZN. The activities and successes of the first year of this project are given below.

SOCIO-ECONOMIC IMPACTS OF RIFT VALLEY FEVER

We have conducted the first One Health cost estimate of the economic costs associated with RVF in South Africa. Building on robust work previously done by the Agricultural Research Council, we reached out to institutions within and outside of the livestock sector – including many of your organisations – to establish the impact of RVFV disease. We estimated that between 2003-2018 at least ZAR 1.8 billion (US$120.6 million) was spent on costs associated with RVF in South Africa, which were primarily born by the livestock sector (85% of all costs, including animals lost, trade impacts, etc.), the financial sector (8%, including lost tax revenue), the human health and productivity sector (5%, including loss of productivity during illness, treatment and loss due to premature death), and the environment and natural resources (2.5%, which may be higher due to potentially unseen higher wildlife losses). We also found that the investment in the prevention and mitigation of outbreaks (e.g. vaccination) was low relative to losses associated with outbreak response over the 15 years in South Africa. There was a very low investment in prevention before the 2008-11 RVF outbreak with a spike in purchasing vaccines during the outbreaks that later declined with time after the outbreaks. We will continue refining these initial analyses with stakeholder input and developing cost-benefit comparisons as the project continues. We also prepared a socio-economic questionnaire that will be administered to heads-of-households to better understand the cost of RVF born by individual livestock owners themselves. This will be distributed in KZN with the One Health baseline survey in Year 2 and the Free State and Northern Cape Region in Year 3.

MOSQUITOES, THE ENVIRONMENT AND RIFT VALLEY FEVER

We have continued long-term research on climate and mosquitoes that may transmit RVFV on five farms in the Free State and started new surveillance at three sites in KwaZulu-Natal (KZN).

Climate and Weather

The past season (September 2019-May 2020) was characterized by below-average rainfall in the west (-100 mm) and higher than average rainfall in the east of the study area (+150mm) in the Free State and Northern Cape Provinces. In KZN, the study sites had below normal rainfall for the entire season (-50 mm), even though rainfall was generally above average in the greater KZN region (Figure 1). As we move into the 2020-2021 season, there is an established La Niña climate pattern over the Pacific Ocean. La Niña years usually mean there is a chance for above-normal rainfall over South Africa elevating the potential for an RVF outbreak.

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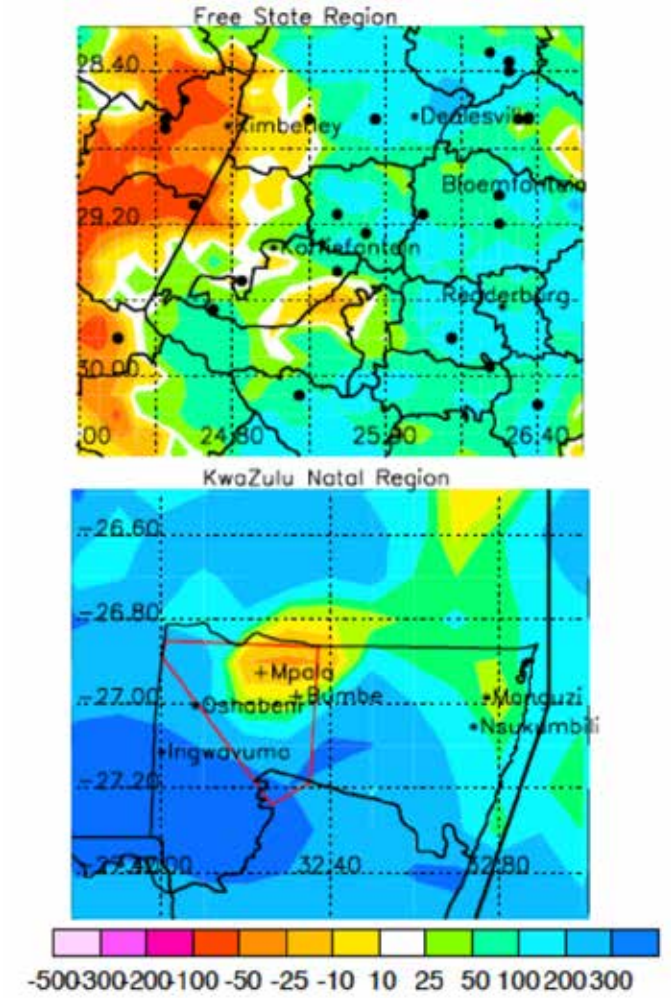


Figure 1: The rain amount of rainfall above (blue/green) or below (red/yellow) normal for the Free State-Northern Cape study area (above) and the KwaZulu-Natal area (below).

Early Warning System

Working from previously developed models to predict the risk of an RVF outbreak, we are developing an early warning system for South Africa. This year we integrated satellite data collected on vegetation (normalized difference vegetation index; NDVI) with the previous model and are currently working on integrating livestock population data into the model.

Further, we have updated the model so that we will be able to produce a new risk map every day, instead of once a month. Work on the early warning system is ongoing.

Mosquitoes

Over 25,525 mosquitoes were collected in the Free State this season (Figure 2) and are still being identified. Work was delayed due to the COVID-19 associated lockdown that was instituted during the peak mosquito production months of April.

We also collected (n = 2000) mosquitoes each month in KZN (through March), which have been identified and are ready for RVFV PCR testing.



Figure 2: Mosquito traps set up in the Free State & KZN

DOMESTIC RUMINANT LONG-TERM STUDY AND KZN BASELINE SURVEY

After obtaining the required approvals, we continued the sheep cohort study of RVFV vaccinated and unexposed sheep in the Free State. We sampled 165 vaccinated sheep that have survived from the previous study and will continue in the study. We consolidated our unexposed sheep on farms that are not vaccinating for RVF and have added one additional farm. Thus, we are monitoring 400 sheep on four farms for RVFV infection. All sheep were sampled in June and September 2020 (Figure 3). There has been a delay in testing due to COVID-19, but we are hoping to complete the testing soon. An analysis of questionnaire data from farmers during the 2010 RVF outbreaks was done to determine which environmental and animal factors were most important to predicting whether a farm was affected by RVF and how severe the outbreak was. Identifying these risk factors can provide critical information to farmers who are making decisions as to whether or not to vaccinate their livestock when RVF risk is high. While we identified risk factors that were associated with higher numbers of abortions or deaths on the farm during 2010, we could not discern the important risk factors linked to whether or not a farm had RVFV on their farm. This highlights the importance of this research being done during an outbreak when the RVFV diagnosis can be confirmed by diagnostic testing.



Figure 3: Collecting samples

The team is ready to start the baseline survey of livestock in KZN. They will do so once we can start sampling people as well so that we can sample both at the same time (using a One Health approach. We are currently planning to start this work in Year 2.

HUMAN BASELINE SURVEY AND QUESTIONNAIRES IN KZN

Sampling planned to start in May was delayed due to the COVID-19 pandemic and restrictions on inter-provincial travel. We are also finalizing the last approvals needed to do this work. We will proceed with the human and livestock baseline surveys once the final approvals are obtained and when it is safe to conduct community work. We have prepared the questionnaire and developed a new booklet to increase awareness about diseases that mosquitoes and ticks spread. The booklet is picture-based, will be available in isiZulu, seSotho, Afrikaans and English and will be handed out to all participants (Figure 4).



Figure 4: A page of the booklet on diseases spread by mosquitoes and ticks prepared to hand out in KZN, Free State and Northern Cape.

COLLABORATIONS & TRAINING

Communicating with our collaborators and stakeholders is essential for the success of the project. We began introducing the project to provincial and district veterinary and public health officials as well as the local communities in KZN.

This was disrupted by the pandemic but will be reinitialized as we can safely conduct our research. Two Masters' students that worked on the project graduated this year. We also began training a postdoctoral fellow and a PhD student, both at the University of Pretoria and focusing on medical and veterinary entomology. We are planning to host a mosquito identification workshop in Year 2 and hope all of our stakeholders, for whom it is relevant, will consider taking advantage of this training.

In the past year, two more scientific articles were published and three more have been submitted or will be submitted shortly.

Before the covid-19 pandemic, and virtually since the pandemic, 16 presentations were given in South Africa and across the globe about the work on RVF in South Africa. The project's work was highlighted in a Netflix documentary series called "Connected" (Episode 5 "Clouds") and the crew visited our team in the field in South Africa (Figure 5).





Figure 5: Filming "Connected," a Netflix documentary at a study pan site in the Free State, South Africa.

PLANS FOR THE FUTURE

As we enter Year 2, the **Reducing the Threat of Rift Valley Fever through Ecology, Epidemiology and Socio-Economics** project will continue to conduct field and laboratory work, including the long-term mosquito sampling and cohort sheep study, the One Health baseline study of antibodies against RVFV in people and livestock in KZN, the first socio-economic survey to identify RVF impacts among heads-of-households in KZN, further characterization of pans in central South Africa and progress on an early warning system.

We thank all of you for participating in the project and our stakeholder meetings and for your continued input which is critical to make this project successful.

We also thank our funders at the U.S. Defense Threat Reduction Agency.

SAVA Community Veterinary Clinics

An initiative of the SOUTH AFRICAN VETERINARY ASSOCIATION

Non-profit Company: 1998/016654/08
Non-profit Organisation: 000-234 NPO
Public Benefit Organisation: 130001321

SAVA-CVC proposal for funding to Scheinberg COVID Relief Fund accepted!



Qualified AWA, Caro Swarts vaccinating dogs with vaccines purchased from the Scheinberg COVID Relief Fund donation. Caro is assisting Envirovet CVC and the photo was taken on 11 August 2021 in Noupoort.

SAVA-CVC is very excited to have been chosen to take part in the COVID relief efforts funded by the Scheinberg Relief Fund.

Mark Scheinberg, an Israeli-Canadian businessman and philanthropist, founded the Scheinberg Relief Fund, together with his family, in March 2020 to help tackle the direct impact of Covid-19. With an allocation of US$50M, the Scheinberg Relief Fund supports organisations and initiatives in locations where the family has a business or personal presence. The four categories the fund supports are Medical Equipment and Supplies, Food Security, the Elderly, and Animal Welfare. Donations have already been made to non-profit organisations and initiatives in 10 countries across 4 continents.

These include Canada, Costa Rica, Cyprus, Isle of Man, Israel, South Africa, Spain, Ukraine, United Kingdom and the United States. https://scheinbergfund.org/

The funds allocated to SAVA-CVC have been allocated to the following categories:

- **More than 1700 canine vaccines have been purchased to sustain CVC operations during a time when donations from the public have greatly reduced.**
- **Our "Subsidize A Pet Sterilization" Project allows a member of the public to choose to subsidize the sterilization of a pet from a lower-income family. The Scheinberg Fund will match every public sponsorship by subsidizing another pet from a family that has had their income affected by the COVID19 lockdown regulations. All owners are required to pay a small amount towards the sterilizations but the fund will subsidize 311 pets.**
- **9x UNISA Animal Welfare Assistant (AWA) students study fees will be paid for.**
- **162 AWA students will receive 40 hours of practical experience with a registered veterinarian to ensure they receive quality practical experience.**

Claudia Cloete
SAVA-CVC Manager



AWA student Mpho Syliva Maphale doing her practical training for her Animal Welfare Assistand course with Cluny Animal Trust. Mhpo was showing community members how to dip dogs in Mashaeng.

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EduCVC
Company
Registration No:
2019/570769/08
FNB Bank Cheque
Account:
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Branch: Brooklyn:
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SWIFT Code:
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SAVA
South African Veterinary Association
Suid-Afrikaanse Veterinêre Vereniging

NOTICE TO MEMBERS

SAVA
South African Veterinary Association
Suid-Afrikaanse Veterinêre Vereniging

ANNUAL GENERAL MEETING (AGM)

Notice is hereby given that the 116th Annual General Meeting of members of the South African Veterinary Association will be held on Saturday 9th October 2021, 08:00

Followed by Federal Council Meeting.

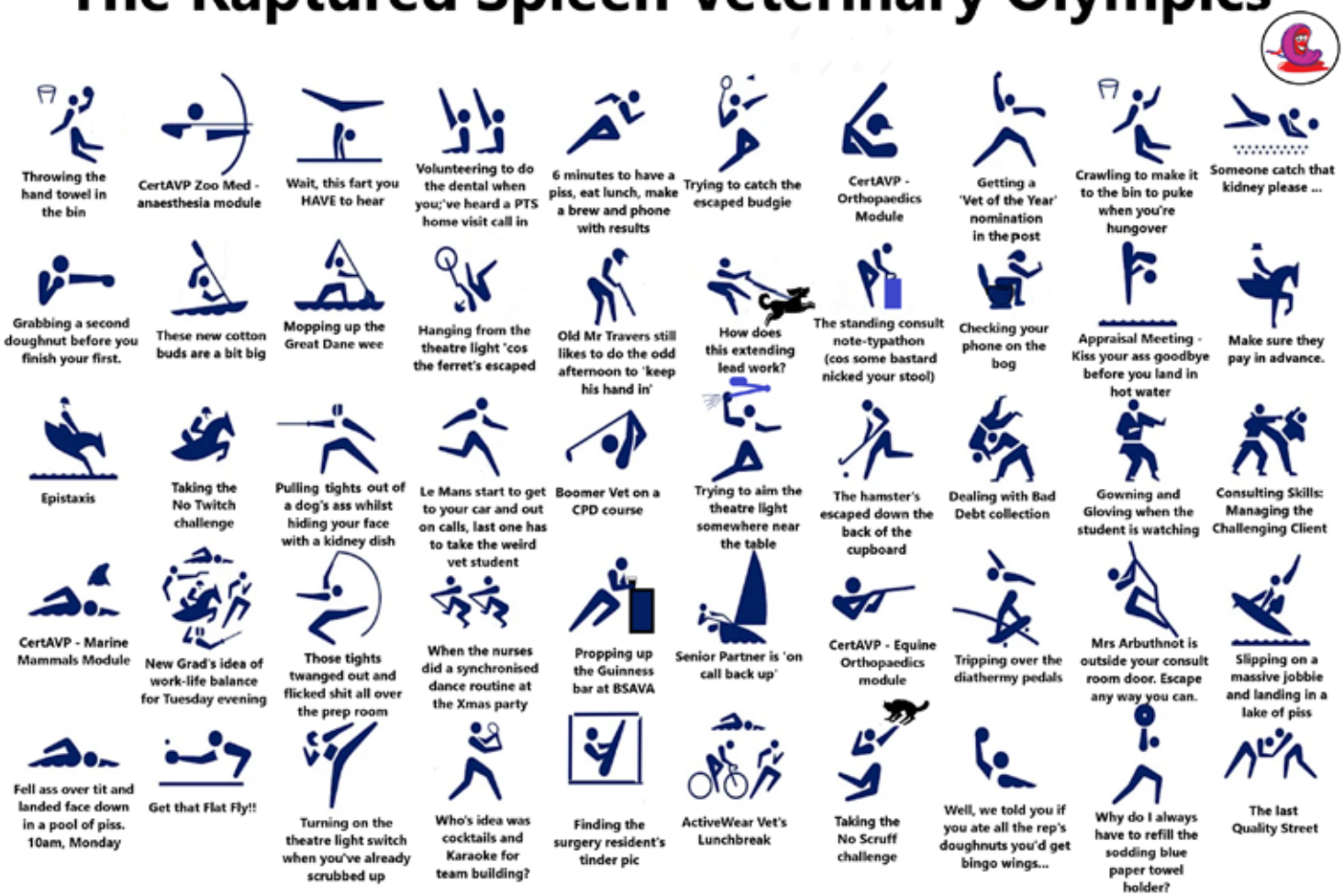
Please note this will be a hybrid meeting.

Should you wish to attend / participate please contact Elize Nicholas on elize@sava.co.za or 072-274 5434

By order of the Board
Registered office: 47 Gemsbok Avenue, Monument Park, Pretoria, 0181

August 2021

The Raptured Spleen Veterinary Olympics



The SAVA Stress Management Hotline is there to assist members who are experiencing personal problems by offering access to professional counselling/advice.

The hotline can assist with referrals or simply offer much needed emotional support when anxiety, depression, anger, grief, lonelinessand fear are at their highest.



The following SAVA members are available on the SAVA stress management hotline. If required, they will refer you to professionals.

Ken Pettey	082 882 7356	ken.pettey@gmail.com
Tod Collins	083 350 1662	tcollins@isat.co.za
Aileen Pypers	072 599 8737	aileen.vet@gmail.com
Willem Schultheiss	082 323 7019	willem.schultheiss@ceva.com
Mike Lowry	084 581 2624	mikelowry@sai.co.za

24-Hour, Toll-Free Helpline (manned by psychologists, social and frontline healthcare workers):
0800 21 21 21

CREDO

SAVA
South African Veterinary Association
Suid-Afrikaanse Veterinêre Vereniging

We, the members of the Association, resolve at all times:

- To honour our profession and its Code of Ethics
- To maintain and uphold high professional and scientific standards
- To use our professional knowledge, skills and resources to protect and promote the health and welfare of animals and humans
- To further the status and image of the veterinarian and to foster and enrich veterinary science
- To promote the interests of our Association and fellowship amongst its members.

Ons, die lede van die Vereniging, onderneem om te alle tye:

- Ons professie in ere te hou en sy Etiese Gedragskode na te kom
- 'n Hoë professionele en wetenskaplike peil te handhaaf en te onderhou
- Ons professionele kennis, vaardigheid en hulpbronne aan te wend ter beskerming en bevordering van die gesondheid en welsyn van dier en mens
- Die status en beeld van die veearts te bevorder en die veeartsenykunde te verryk
- Die belange van ons Vereniging en die genootskap tussen sy lede te bevorder.

THE NAHF NPC – EXISTENCE AND WHAT WE ARE DOING

The National Animal Health Forum (NAHF) was established in 2006 by a group of concerned veterinarians and animal production groups. There was a need for a forum whereby veterinarians together with the animal production groups could liaise with the government regarding animal disease control matters as a collective.

In 2010 the National Animal Health Forum was briefly inactive whereby it was re-established in 2011 and meeting again regularly with the Department of Agriculture Land Reform and Rural Development-previously DAFF.

Our logo contains the words "Linking Animal Health" which is something we strive for. The goal of the National Animal Health Forum is public-private partnerships to improve liaison on veterinary services and compliance with animal health standards.

In 2020 the NAHF undertook structure and strategy changes under new management whereby the NAHF Member Council restructured the Memorandum of Incorporation of the company. The strategy includes driving the projects of the NAHF under the pillars of the National Veterinary Strategy of 2016 signed by Dr Mike Modisane. The National Veterinary Strategy was collated from the outcome of the PVS Gap Analysis report 16-27 June 2014 as received from the OIE. The 5 pillars identified in the National Veterinary Strategy included Animal Health, Veterinary Public Health, Feed and Food Safety, Veterinary Laboratory Diagnostics, Animal and Product Identification, Recording and Traceability, and Animal Welfare.

The NAHF is dedicated to creating an additional pillar for Liaison and Communication through which any animal health and welfare-related communication will be shared with the industry and government stakeholders. The NAHF members and stakeholders meet with the National (DALRRD-NAHF Liaison Committee) and Provincial Veterinary Services (Provincial Animal Health Forums) quarterly to discuss matters that need additional attention from the animal production industries. We have in the past few years been able to assist in the surveys for Foot and Mouth Disease Outbreaks and African Swine Fever Outbreaks through the supply of additional capacity to the DALRRD office. We assist in finding recourses to apply to disease outbreak situations, and we bring technical assistance to the table when the need arises.

The NAHF Board:

Chairperson:
Mr Gerhard Schutte
(Red Meat Producers Organization Representative)

Vice Chairperson:
Mrs Margaret Churchill
(SA Animal Health Association Representative)

Independent Director:
Mr Nico van Aardt

The NAHF Members Council:

Full Members:

- Mr Gerhard Schutte (Red Meat Producers Organization Representative)
- Mrs Margaret Churchill (SA Animal Health Association Representative)
- Mr Leon de Beer (National Wool Growers Association Representative)
- Dr Mackie Hobson (Mohair SA Representative)
- Mr Gert Steyn (SA Veterinary Association Representative)
- Mr De Wet Jonker (Milk SA-SA Milk Processors Association Representative)
- Mr Izak Breitenbach (SA Poultry Association Representative)

Associate Members:

- Mr Dewald Olivier (SA Feedlot Association)-Indicated at the Annual General Meeting (2 August) that they will be full members
- Mr De Wet Boshoff (Animal Feed Manufacturers Association)
- Mr Attie Westraad (Federation for Small Stock Breeders SA)
- Mr Richard York (Wildlife Ranching SA)
- Dr Beverly Parker (SA Equine Health and Protocol)-Indicated on the 28th of July that they will be full members

Manager:

Ms Marzanne Polydorou

We have been tasked to give feedback to you, the veterinarian, each month which we will do here in the VetNews.

We look forward to sharing information that will benefit the veterinarian and the important work you do for South Africa regarding food safety and food security.

Please visit the NAHF website at:
www.nahf.co.za

Facebook Page:
@TheNAHF

We share on Twitter:
@TheNationalAni1

LinkedIn:
https://www.linkedin.com/in/marzanne-polydorou-12a86a140/

In Memoriam

EULOGY: THE LIFE AND TIMES OF THE GREAT DAWID KRUGER



In 2019 the Class of 1969 celebrated their 50th graduation anniversary, and everyone was asked to submit a CV for the records. Dawie Kruger sent such a frank and funny one that it will serve as a tribute and memorial to him, to his life and his times. It has been slightly edited but retains his wry, quirky sense of humour and his irrepressible spirit.

"Hi there Friends, Family, Ex OP convicts, fellow Geriatrics and other earthly creatures. I bring you this narrative to remind you that for a short period of time you were in the presence of a great person, philosopher, student and various other good qualities. I hope you will not be bored to death, but then again at our age one has to die of something."

Hercules Dawid Kruger (the first name should already tell you of the stature of this man) was born on the 3rd March 1946 at Edenvale hospital near Johannesburg. His father, having preferred him to be female, adopted a baby daughter when he was 8 years old and she later turned out to be a real pain in the butt, telling the whole family that her "rich" vet brother thought he was better than them (the family), while he was working 24/7 to keep his three children, Gert, Doret and Retha, in shoes.

And of course, the family believed her because vets were thought to be overpriced. Even after trying to avoid the family he still got the nickname Ryk Dawid alongside the other family nicknames; Oom Dawid, Klein Dawid, and Jong Dawid. A lot of Dawids' in the family.

His father took the family on a tour of South Africa to show the people this wonderchild. The tour included towns like Grahamstown, Kirkwood, Queenstown and Port Elizabeth. Mixing mainly with English friends is where he picked up his immaculate knowledge of the English language. Finally, they landed upon the East Rand, Brakpan, Boksburg and Benoni and eventually (thankfully) Germiston. (Moved 19 times in 18 years).

He spent his high school years at Vryburger High School, where he was more au fait with the headmaster's office and cane than all the other classrooms put together. That made him even more "hardegat". Although I must admit that it was also maybe the right medicine, that allowed him to pass matric and be accepted at Onderstepoort [which in itself was a miracle]. There was another good thing that happened when he was in matric – he met this beautiful young girl Marthie (in standard 6) with raven black hair who he could raise to be loyal and obedient. Not that he succeeded. Don't tell her, but he was still gaga about her after 55 years.

He was of course called a cradle-snatcher after this became standard knowledge with the teachers. He then spent 9 months in the army (1964), 3 months in Bloemfontein, 6 months in Middelburg Transvaal, where it was so cold at night you could hear the rats' teeth chattering. Then on to university. He only passed the first year by receiving the answer papers to Physics 4 days before the final exam from the friend of a friend of a friend of the "oke" that was dating the prof's daughter.

The other miracle was passing the 4 years at Onderstepoort in 4 years (although he had a supplementary exam every year, qualifying in February 1970). In his final year, he failed Pathology by refusing to say "I don't know" to a question by Smitty (which would have resulted in immediate failure). If he wanted to fail him, Smitty had to do it himself, so he stared at Smitty's office carpet for 15 minutes whilst the 12 people in the office all maintained a deathly silence until a merciful Tustin said "You can go". He then saw the students waiting their turn outside, looking at him bug-eyed, wondering about the 15 minutes, and shaking his head he quipped "He is in a bad mood" thereby adding to their absolute inherent terror of the great man. He never forgot the patterns on that carpet.

He joined a Pretoria practice as an assistant in March 1970 but somehow failed to notice that the veterinarian's wife had red hair. At that stage, Pretoria only had 7 private veterinarians? Now there seems to be one squatting on every street corner. This fantastic human being treated Dawid as an equal and was an excellent teacher, especially in surgery where he was doing ops on the brain and middle ear, which boggled Dawid's mind but instilled in him his love for surgery. Back to the red-haired wife.

Dawid was having his pie and coke in peace during his lunch break, answering the telephone when she stormed in asking why he was so lazy just sitting there doing nothing. One word led to another and the crowning one was Dawid calling her something he should not have. Wanting to concentrate more on large animal work, he opted to go it alone.

His two choices in starting a practice were Bronkhorstspruit and Wellington in the Cape (too far from his wife's mother) so the poor wine-lover started in Bronkhorstspruit, where he experienced the following truths: farmers don't like vets, farmers don't like using vets, farmers think they know more about animal health and diseases than vets. Farmers think that "veeinspekteurs" are smarter than vets and finally, they don't like paying his overpriced bills. So after 17 years of this abuse, he joined a practice in Rustenburg as a partner (1988). This, unfortunately, did not work out and he and Ferdie Ipland built their hospital designed as a small animal facility.

In 1992 his heart attacked him for the first time and he had bypass surgery at Unitas Hospital in Pretoria. After 5 days he was released back into society. In 1996 he was diagnosed with brain cancer (of the slow-growing invasive and inoperable kind) and he retired in 1998 and there was our sad hero singing "O lonesome me" once again. In 2002 he had his second heart attack and unfortunately ended up with full-blown diabetes.

In 2002, two smartly dressed men entered the practice and started to measure Dawid's torso. On being asked the reason for this indignity, they replied that the straight-jacket must fit comfortably. He got the message and sold the practice to the wife of a SA veterinarian working in London, with the wife having to raise two kids in a London flat while longing for her mother staying in Rustenburg.

He then bought a family tent and freezer and with his wife and son toured the coast from Springbok to Cape Town and Port Edward, visiting all the small towns he had to bypass in the past. In Addo Elephant Park, three weeks into the tour, something strange happened to him.

Somebody approached him, looking exactly like him. Only on closer inspection did he recognise his soul catching up to him. He then spent three weeks loafing at home before starting to do locums. (His wife counted 38 practices between 2003 and December 2017), some once-off, some on a more regular basis.

In January 2018, after developing a roaring case of diarrhoea, he ended up in hospital with acute heart failure. Various scans and sonars confirmed he only had 30% viable heart muscle left, a human can live a reasonable life with 50%. He was promptly put on 11 different medications which caused a range of delightful side effects and was forbidden strenuous exercise, so he sat doing nothing the whole day which he did very well, playing with his laptop. Amidst all this moaning and groaning, don't get the idea that he was not happy. He felt that he had lived a full and joyous life, achieving most of his goals and dreams (except that ruddy Porsche!).

In conclusion Joshua in chapter 24 and the last part of verse 15: "But as for me and my house, we will serve the Lord." is a true reflection of his life.

Dawid Kruger died at peace on 8th August 2021.

Gareth Bath



Influential Life Coaching

50 THINGS – ONLY?



Dr Mats Abatzidis

B.Sc. B.V.Sc.

New Insights Certified VIP Life Coach
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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!!! As the year has progressed, we have witnessed times when things have improved and times when circumstances have taken a dip again. That unfortunately is **the cycle of life**, with peaks and troughs, good times, and bad times. After a long time of fighting COVID-19, as well as the socio-economic effects of this disease, not to mention all the other challenges that life has to throw at us, some people have hit that wall and wanted to quit. Some feel burned out and exhausted. You start to dread every upcoming appointment and experience. I would like to share a very simple exercise with you that I have personally witnessed change peoples' lives for the better.

I know of so many people who feel the same way, and their complaints resonate deeply with me. Perhaps your attitude has changed, and you find that you are isolating yourself socially, not wanting to do anything and just stay at home. You might even convince yourself to skip work. **Multiple disconnections** start to happen with people, events and even habits.

I want to share an exercise in the form of an example. I once met someone, thankfully after I became a certified VIP life coach. This individual shared with me their path of despair and how they had reached that point. Felt stagnant and unfulfilled. After **one simple but important shift**, their perspective changed, and we now could reengage with the task at hand joyously. My purpose was not to provide answers. Simply causing a shift.

Here is the task I shared with my colleague and friend. **Write a list of 50 things that make you happy**. It caused great confusion at first. The link between this list and finding a solution to his stagnancy was not evident. It was accepted reluctantly with the promise that it would be done by the next day. Here is an example of this exercise.

1. **That I'm a child of God**
2. **I have Eternal Life**
3. **My mom chose me**
4. **To have an enquiring mind**
5. **My compassion for people**
6. **That I can see**
7. **That I can hear**
8. **That I can feel**
9. **That I can smell**
10. **That I can walk**
11. **That I can experience emotions**
12. **That I have a home**
13. **Luka and Bella, our dogs**
14. **The birds that I can hear from 04:30 in the morning**
15. **Beautiful sunsets**
16. **My amazing friends that keep me accountable**
17. **Beautiful music**
18. **Memories**
19. **A telephone to connect to others**
20. **A car to drive**
21. **Freedom to drive**
22. **My staff at work**
23. **The smell of rain**
24. **Seeing plants grow**
25. **Children**
26. **A good Movie**
27. **A great Café Latte**
28. **Road trips**
29. **To make a difference**
30. **To spoil someone**
31. **Playing golf**
32. **Being alive with possibility**
33. **Playing cards and board games**
34. **The laughter and bantering with friends**
35. **Preparing a good meal**
36. **Swimming and diving…feeling completely free under the water**
37. **Hiking in the mountains**
38. **Reading a good book**
39. **Helping people**
40. **Putting a smile on someone's face**
41. **The sound of the sea and the breaking of waves**
42. **Having a computer**
43. **Being able to study**
44. **Knowing that miracles can happen**
45. **Having the opportunity to grow as a person**
46. **Free will**
47. **Smelling roses**
48. **Being able to hug my best friend every day**
49. **The view from my room**
50. **God's unconditional Love**

There are **no right or wrong answers**. The answers do not need to involve big, expensive, and fancy activities. They can be the simplest of experiences.

The next day, my friend returned with an incomplete list. There were only 34 answers listed. I urged them to take the list back home and think simply and with their heart rather than their brain. Think back to childhood or less troublesome times when their mind was less troubled and more engaged and inquisitive about their surroundings. Sometimes it helps to **do one or more of the activities** listed already and carry on with the list.

The following day the list was completed and presented with a grin. Then I made a request that I was not very popular for. I printed another empty list of 50 lines and asked them to add another 50 things to the list.

Now, that the principle of simple and pleasurable activities was understood, my friend was able to provide me with yet another 50 joyful activities that made them happy. The list of 100 in total was completed within one day.

The exercise shifted my friend's energy and focus from a negative one to a very positive one, in a simple and very powerful way. The **energy and focus were maintained** by revisiting the list daily and even adding to it when new lines could be added. The result was a couple of life-changing events within 4 weeks that we both look back upon and rejoice for as often as we can, joking about the fact that I added another list of 50 to the first.

Next month, we will continue this principle and looking at positive ways to embrace the new world post-COVID19, healthy, safe and reengaged.

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Underwater Treadmill or Swimming?

Tanya Grantham



Hydrotherapy has enormous benefits for health and wellness in our canine (and feline) patients. There seems to be a notion within veterinary circles that the underwater treadmill can cure all manner of injuries, gait abnormalities and weaknesses and that the swimming pool has almost taken a back seat in physical rehabilitation. The reality is that a treatment modality is only as good as the therapist. The therapist must have sufficient training and clinical reasoning skills to be able to choose an appropriate modality and apply it to reach the therapeutic goals set for the patient. In the same way a diagnostic ultrasound can give a veterinarian much information about the internal organs, but the skill lies in the diagnostician's ability to manoeuvre the probe, and to interpret the image that is presented on the screen. It is my opinion that some 60% of dogs placed in the underwater treadmill will improve. The question is, if the operator has little knowledge of the apparatus, what happens to the remaining 40%?

After performing a physiotherapeutic examination on a patient and spending a great deal of time questioning about history, lifestyle, ability, and resources a decision is made regarding a program. The following questions may help in making a choice between underwater treadmill (UWT) sessions or swimming.

Does the dog like water? Any previous exposure to swimming at home? Or regular bouts of play in the local pond, river or ocean? If yes, then the pool is in. If no, then the UWT can be used very successfully to introduce the patient to water in a VERY controlled environment. The depth of water and the speed at which the dog can move is highly variable, and adaptable to the patient. The introduction occurs in a tank, further adding to the control. If the patient has undergone surgery and healing is incomplete, then uncontrolled kicking (as occurs with anxiety) is avoided. The surgical site is protected. If an UWT is not available, a skilled therapist can still use a pool for rehab. Does the dog or a specific limb require support? With neurological patients a goal may be to assist with re-establishing posture. If this is so, then the ability for the dog to stand supported is important. An UWT may be the correct choice. The medium of water provides important proprioceptive feedback.

Is there a joint issue? Can the injury or surgical site withstand any pressure? Buoyancy of water helps to reduce weight bearing and thus concussion on affected joints. A pool or UWT may be useful. In the case of bone fractures an UWT is preferable because some weight bearing is required to stimulate new bone formation.

Is muscle strengthening required? Which muscles? The resistance of the water can assist with initial muscle activation, but a patient will soon reach a plateau in the UWT. Progressive loading is required to move the patient to the next level of rehabilitation. An UWT may not be appropriate for this adjusted outcome. But the patient may need core activation and stabilisation. Swimming is a wonderful modality for this.



Is the dog old? Or a brachycephalic breed? The cardiovascular load of swimming may be too much for such an individual. Having said that, an older Golden Retriever may benefit from the buoyancy in terms of release of muscular tension. A Pug may benefit from swimming in a float coat.

Does the problem require increased flexion of a joint or improved extension? Or both? Swimming increases joint range of motion, particularly in flexion. The UWT seems to favour improved extension, but no research is yet available to support this. However, changing the water level makes use of surface tension to change joint motion. So, should we use an UWT? Some dogs are not strong enough to walk through the water when it is at a lower level.

Does the dog have a compensatory or neurological pattern that needs to be changed? The UWT may further enhance the pattern that is present.

Swimming is different to any gait or pattern and so this may be required to allow changes in movement, release of muscular tension, and strengthening in order to achieve the desired result. In fact, the UWT may exacerbate certain patterns if used inappropriately.

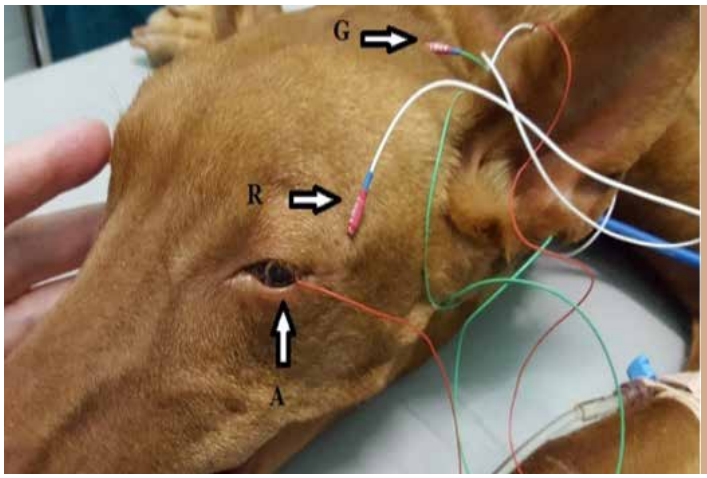
As stated before, hydrotherapy is a hugely beneficial modality, but it can create larger problems if used inappropriately.

"A rehab plan is not a one-size-fits-all approach, and the underwater treadmill is not a magic piece of equipment from which every patient will benefit. It can, and should be, used when appropriate for the patient. The reality, however, is that with the growth of the canine rehab field has come the overutilization of this modality of treatment."
www.thek9pt.com

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Dr Antony Goodhead,
Specialist Veterinary Ophthalmologist,
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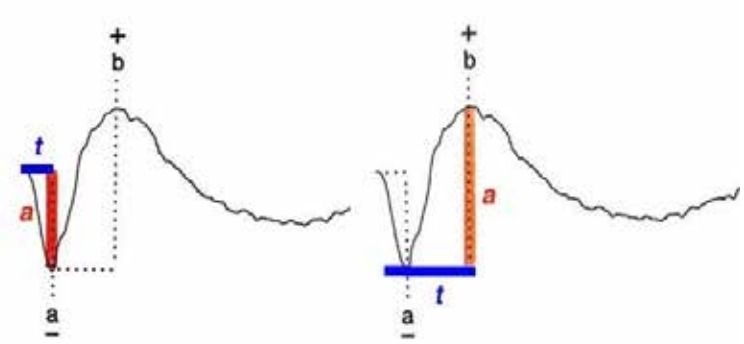
Both medical and veterinary ophthalmologists frequently need to perform an electroretinograph [ERG]. Many veterinarians have been exposed to this term when reading patient reports from the ophthalmologist but may not fully understand the rationale behind this very important tool that we have.

Electrodiagnostic testing provides a unique, non-invasive opportunity to probe the visual system from the retina to the visual cortex in most animal species. This technology measures the electrical potentials generated in various parts of the visual system. It is important to realize it is not a measure of grading of vision. The ERG is a complex response from different cells within the retina which may be useful in diagnosing outer retinal disease. The ERG allows us to assess the function of the retina which is visible through an ophthalmoscope and is thus considered to be an electrical mass response of the retina to light stimulation, which reflects the function and integrity of the photoreceptors and other retinal cell layers. The first ERG was performed in 1865 but only really applied clinically in 1941 and then later in 1967, Ragnar Ganit pioneered most of the research on ERGs to what we know today and for this, he received a Nobel Prize.

The equipment involves:

- the commercially available computer software that acquires the data from the electrodes following a flash stimulus. These signals generated from the retina are very small in amplitude and then need to be magnified approximately 10^4 times to be properly visualized. Hence the amplitudes are presented in microvolts. Signal averaging will also reduce the impact of background noise.
- A photo stimulator – this can be a strobe-type light or a light-emitting diode [LED]. The light source should try and provide uniform illumination to the retina.
- Electrodes – the electrical changes produced by light stimulation of the retina are usually recorded using an active electrode touching the cornea. This is a gold leaf JET contact lens electrode. A topical anaesthetic and a contact gel are used. A reference needle electrode is placed subcutaneously in the skin just lateral to the lateral canthus and then a ground needle electrode is placed subcutaneously on top of the head between the ears.
- The patient is dark-adapted for 15 minutes in a room with a red light when rod measurements are to be performed.
- For routine ERGs the patient is conscious but sedation or general anaesthesia may be required to maintain proper fixation when more comprehensive ERG testing is required for research purposes.

The ERG is usually reported by providing values for the implicit times and amplitudes for the "a" and 'b" waves. [see figure below].



a-wave: a rapid cornea-negative potential deflection: This reflects the negative change in the intracellular charge of photoreceptors [hyperpolarization so more negative] caused by the light-evoked closure of the sodium channels in the cell membrane.

This is from rods when scotopic [dark] conditions apply [dark room] and cones with increasing stimulus strength or from cones when photopic conditions apply and rods are suppressed.

b-wave: Thus is a corneal-positive deflection primarily from ON rod bipolar cells, with a later negative component from OFF bipolar cells. Other glia cells like Muller cells, amacrine -, and ganglion cells also affect amplitude and shape. This wave is measured from the trough of the a-wave to the following positive peak.

The **Oscillating potentials [OPs]** are a series of wavelets superimposed mainly on the ascending limb of the b-wave. This waveform is thought to be generated by a radial current flow driven by amacrine cells.

Retinal ischemia may cause the reduction of OPs.

Amplitudes will decrease and implicit times increase when intraocular pressure during glaucoma occurs. OPs will be abnormal in disorders primarily affecting the outer retina because input from the outer retinal cells to the amacrine and interplexiform layer will be reduced. Such an example will be dogs with rod-cone dystrophy.

Implicit time: Is the time between the light flash and the peak of the response. For the a-wave, this is from the time of the flash until the trough of the a-wave and for the b-wave, it is from the time of the flash to the highest point of the b-wave.

Lesions in the retina will result in a reduction of the amplitudes and an increase in the implicit times

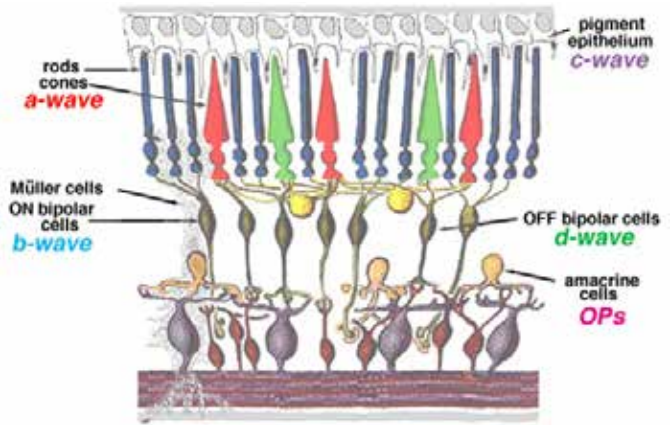


Diagram of the retina to show where the major components of the ERG originate

Clinically where do we rely on ERG readings?

1. The ERG is a **retinal function test only** so in cases of acute onset blindness it is clinically very important to be able to separate a retinal disease from an optic nerve condition. Optic neuritis affects the optic nerve exclusively so an expected patient with optic neuritis will have normal ERG, normal retinal function, yet be blind. The other very important condition is Sudden Acquired Retinal Degeneration [SARD]. This is thought to be an immune-mediated retinal disease affecting photoreceptors and these patients will record flat line ERGs.
2. A short ERG protocol is used to determine if the retinal response is absent or present before cataract surgery. This is an imperative test and would be pointless to consider cataract surgery in a dog that is already showing very poor retinal function.
3. By performing, ERGs where we selectively test rod or cone function can be used to identify some of the hereditary retinal conditions that affect outer retinal cells. Progressive, generalized, bilateral retinal degeneration leading to blindness.is such an example. In "Classic" PRA dogs, they have an initial loss of rod function with a slower loss of cone function. However, can also have mutations that cause cone-rod dystrophy. PRCD is an example of PRA with an initial normal ERG and declining amplitudes on longitudinal study paralleling progressive loss of photoreceptors. Genetic testing is available. PDE6 mutations have a lack of rod response on ERG from the earliest age ERG can be recorded. At an early age, cone responses are essentially normal.
4. The ERG is the best method to assess retinal function in all cases where there are opaque ocular media.
5. The ERG is frequently used to assess retinal function in cases of glaucoma and especially in patients presented with lens luxation and secondary glaucoma. Before a more complex lens extraction surgery is performed it would be good to know if the retina is still functional. In cases of no retinal function, it may be prudent to be considering an enucleation versus lens extraction!

Some other interesting facts regarding ERGs:

At birth, the photoreceptor layer in puppies is not formed and the ERG would be absent. It begins to appear in puppies at about 10-15 days of age and is completed by 15-28 days. In dogs, the cone system develops more rapidly than the rod system. These tend to normalize at the 5-8th week of age.

The waveform of the ERG changes from being dominated by the a-wave to be dominated by the b-wave of the outer plexiform layer.

The greatest changes occur between the 3-4th week of age corresponding to the maturation of the inner and outer nuclear layers of the retina. Kittens on the other hand are born with an immature visual system that requires about 4 months to mature.

References:

Pasmanter and Peterson-Jones, A review of electroretinography waveforms and models and their application in the dog. Veterinary Ophthalmology. 2020; 23:418–435.

Veterinary Ophthalmology, Chapter 10, Part 4 5th Edition.p684-698

http://eyewiki.aao.org/electroretinogram



South African Pork Production and Improvac

Dr Susan Dawson:
Technical Manager, Pigs and Poultry

Zoetis Animal Health Pages

FOR ANIMALS. FOR HEALTH. FOR YOU.

Improvac®

Pork is not the most consumed meat in South Africa; that title goes to chicken. Aside from cost per kilogram, certain beliefs (like it being an unhealthy, dirty meat) held consumers back from choosing pork in the past. However, there has been an interesting shift in consumer perceptions. In a qualitative study co-funded by SAPPO and Zoetis it now often ranks as the favourite meat in households. They have found pork to be an affordable, tasty and versatile meat.[2] These consumers are looking for fresh, good quality, affordable and readily available pork.

What defines tasty meat?

A lot of research goes in to answering this question with many papers describing and defining parameters that can help objectively quantify what a desirable piece of pork is. Generally sensory scoring looks at juiciness, tenderness, flavour (including 'off flavour') and overall acceptance. Parameters that we unconsciously think of at a good braai.

What can make pork taste bad?

Intact or entire male (EM) pigs tend to grow better than physical castrates (PC). However, they can be linked to 'boar taint'. Boar taint is that sweaty, urine or faecal like smell, 'off taste'[2], or an odd 'piggy' smell when pork is being cooked or eaten. Sometimes it is not even a conscious recognition, just a thought that flits through one's mind that the pork did not taste good or tasted a bit strong.

Fortunately, we know what causes it and there are ways to control it. Boar taint is caused by two substances: androstenone and skatole. Androstenone is produced by the testes in sexually maturing male pigs. Skatole is produced by bacteria in the gut of both males and females when they ferment tryptophan. There is a strong synergy between skatole and androstenone as the steroids limit the liver's ability to break down skatole. Both accumulate in the fat: it is especially noticeable during cooking and the intensity decreases as the meat cools. This could affect whether the person doing the cooking will decide to purchase pork in the future.[4]

Interestingly, women are generally better at detecting boar taint than men.[4] To limit boar taint, pigs are either marketed before puberty or castrated. Another consideration is that to meet consumer requirements, pigs have been bred steadily leaner.

But as leanness increases, so tenderness can decrease.[9] A dry, crunchy chop is not appealing.

The South African situation

South Africa is a non-castrating market. To avoid boar taint in the meat and assure consumers of good quality pork, pigs are generally slaughtered at about 22 weeks of age.

However, slaughtering this early could mean that producers are missing out on the full potential of the genetic improvements that have happened over the years.[3] This is an area well worth exploring as the South African population desperately need access to good quality and affordable protein sources.

Introducing Improvac

Improvac is a vaccine that contains a gonadotrophin releasing factor (GNRF) analogue protein. The purpose of this protein is to stimulate the immune system to produce antibodies against the host's endogenous GNRF.

These antibodies prevent the release of luteinising hormone (LH) and follicle stimulating hormone (FSH) and thereby preventing their effects on the testes. In a 'nut' shell: testosterone and androstenone are inhibited.

How does this help?

Immunocastration has a direct impact on the welfare of the pigs. They are not subjected to physical castration without analgesia or anaesthesia.

Immunocastrated (IM) pigs have lower levels of both androstenone and skatole thereby controlling boar taint.[1]

Also, by inhibiting testosterone production there is decreased fighting and aggressive behaviour leading to calmer pigs which are easier to work with and injure each other less[1,5].

IM pigs fall between PC and EM pigs in terms of production and meat characteristics. Producers can allow the pigs to grow as an EM (benefit from the growth induced by testosterone) and then give Improvac before slaughter to control boar taint.[8]

IM pigs accumulate more fat than EM pigs but not as much as PC pigs with a fat composition that can be more desirable.[6,10]

As IM treated pigs have a better feed conversion ratio than castrates: the amount of feed needed to produce a kilogram of meat and the amount of faecal matter produced is reduced.[8]

These are both factors that are important with regards to environmental impact.

Conclusion

There is a lot more work being done on the use of Improvac in swine with more benefits coming to light. At the heart of it though, immunocastration with Improvac is a versatile tool to controlling boar taint and testosterone production.

If used correctly, this can help the producer to meet the South African consumer's needs while achieving welfare friendly production.

For more information please speak to your Zoetis Representative.

References

1) Zamaratskaia et al (2008). 'Long-term effect of vaccination against gonadotropin-releasing hormone, using Improvac, on hormonal profile and behaviour of male pigs' *Animal Reproduction Science* 108, pp. 37 - 48
2) 2019 'Breakthrough: New research shows the pig is out of pork'. *Porcus* Jan-Feb 2019, pp 10, 11 and 15.
3) Pieterse, E., Loots, L.P. and Viljoen, J. (2000) 'The effect of slaughter weight on pig production efficiency' *South African Journal of Animal Science*. 30 (Supplement 1). *Short paper and poster abstracts: 38th Congress of the South African Society of Animal Science*
http://www.sasas.co.za/Sajas.html
4) Griffiths N.M. and Patterson R.L.S. (1970) 'Human Olfactory Responses to 5α – Androst-16- en- 3- One Principal Component of Boar Taint'. *Journal of the Science of Food and Agriculture*. Vol 21 January 4 - 6
5) Andersson, K., Brunius, C., Zamaratskaia, G., and Lundstrom, K. (2012) 'Early vaccination with Improvac: effects on performance and behaviour of male pigs.' *Animal* 6(1), pp 87–95 doi:10.1017/S1751731111001200
6) Hugo, A., and Roodt, E. (2015) 'Fat quality of South African pigs with different carcass classification characteristics' *South African Journal of Animal Science*. 45 (3)
7) Morgan, L., Itin-Shwartz, B., Koren, L., Meyer, J.S., Matas, D., Younis, A., Novak, S., Weizmann, N., Rapaic, O., Ahmad, W. A., Klement, E. & Raz, T. (2019) 'Physiological and economic benefits of abandoning invasive surgical procedures and enhancing animal welfare in swine production' *Scientific Reports* 9 (16093) https://doi.org/10.1038/s41598-019-52677-6
8) Nautrup, B. P., Van Vlaenderen, I., Aldaz, A. (2018) 'The effect of immunization against gonadotropin-releasing factor on growth performance, carcass characteristics and boar taint relevant to pig producers and the pork packing industry: A meta-analysis' *Research in Veterinary Science*. 119, pp 182-195. https://doi.org/10.1016/j.rvsc.2018.06.002
9) Jaturasitha, S., Pichitpantapong, S., Leangwunta, V., Khiaosaard, R., Suppadit, T. & M. Kreuzer, M. (2006) 'Increasing the Slaughter Weight of Boars: Effects on Performance and Pork Quality' *Journal of Applied Animal Research* 30 (1), pp. 19-24, DOI:10.1080/09712119.2006.9706817
10) Zoels, S., Reiter, S., Ritzmann, M., Weiß, C., Numberger, J., Schütz, A., Lindner, P., Stefanski, V. and Weiler, U.(2020) 'Influences of Immunocastration on Endocrine Parameters, Growth Performance and Carcass Quality, as Well as on Boar Taint and Penile Injuries' *Animals* 10 (346) doi:10.3390/ani10020346

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Colour Doppler:
How to incorporate it into your day-to-day examinations, and tips on optimisation

By Ben Sullivan BVSc MRCVS

Colour Doppler, sometimes referred to as Colour Flow Mapping (CFM), has become almost ubiquitous on modern veterinary ultrasound machines. It is a specialised form of ultrasound imaging that utilises Doppler shift information to provide a two-dimensional (2D), visual representation of blood flow overlaid on a black-and-white B-mode image.

Indications for use

Many readers will see the word 'Doppler' and immediately associate it with echocardiography, in particular more 'advanced' echocardiographic applications. However, to limit oneself to using CFM solely in this context is to miss out on a mine of valuable information.

When considering potential applications for CFM, I find it useful to remind myself what it is that CFM actually tells us. I tend to think of the technique as providing three distinct pieces of information:

1. A binary 'yes-or-no' regarding the presence or absence of flow in a particular anatomical location.
2. A semi-quantitative representation of flow velocity (direction and speed).
3. A relatively subjective assessment of flow quality (i.e., laminar vs. turbulent flow).

I can then use this framework to consider when I might benefit from using CFM; that is to say, if one or more of the above pieces of information would be of clinical importance, then there's merit in using CFM.

There are, however, some commonly encountered situations for which you'd have to argue hard to convince me that CFM **shouldn't** be used.

Assessment of masses for neovascularisation

Given the potential differential diagnoses for masses in general terms (neoplasia, granuloma, haematoma, cyst, foreign body, abscess, etc.), the ability to assess for neovascularisation can provide valuable information to narrow down the list.

Assessment of organ perfusion

The ability to assess the perfusion of parenchymatous organs can be useful when there is suspicion of, for example, infarction. This benefit of the technique can be a little machine-dependent, as it requires quite sensitive CFM technology, but is certainly worth bearing in mind.

Visualisation of vessels as anatomical landmarks for small abdominal structures

Some of the smaller, more challenging-to-image organs in the abdomen – adrenal glands, lymph nodes, pancreas, etc. – can be more confidently identified by locating nearby vessels. However, this can be difficult in some instances, either because the vessel may be inherently trickier to spot, or because the organ you're trying to image may look surprisingly similar to a vessel. CFM can make identification of the vessels (and therefore also the structure of interest) much easier.

As an additional technique when performing ultrasound-guided biopsy procedures (FNA, Tru-Cut®, etc.)

Many readers will have experienced the unpleasant sensation associated with performing an ultrasound-guided biopsy procedure in a tricky case which then goes on to suffer from post-procedure haemorrhage. This risk can never be completely eliminated, and adequate consideration should be given to risk vs. benefit, and pre-procedure assessment of clotting profiles, etc. However, the use of CFM during the procedure can help bolster your confidence if you can identify the larger vessels that are most likely to cause haemorrhage if punctured , and consequently avoid them.

Assessment of suspected thromboembolism

There is some debate about the sensitivity and specificity of CFM in assessing certain thromboembolic conditions, such as 'saddle thrombus' formation in cats. However, there is no doubt that in some cases, thrombi can be more easily visualised by combining B-mode imaging with CFM to highlight the reduced (or sometimes non-existent) flow of the vessel lumen.

Echocardiography

I have, for the most part, listed these potential uses of CFM in

no particular order, with the exception of leaving perhaps the most obvious use-case until last. This was a deliberate choice on my part as it is already the most well-known application and one that needs little expansion or explanation. Colour Flow Mapping can be very useful in identifying various pathologies within the chambers of the heart (and in the great vessels), and can be used to direct more advanced and objective, (spectral) Doppler techniques used to provide quantitative data on flow quality and velocity.

As time goes by, there is an ever-increasing number of potential applications for CFM, and as technology improves these are likely to become ever more mainstream in their use. Large animal reproduction is an area of particularly active research where CFM is concerned – there is a mounting body of evidence showing that CFM can be used in assessing ovarian function, fetal health, and more. It will be interesting to see what the future holds.

Optimisation Tips

The myriad controls available to the user when CFM mode is activated can seem daunting, even on the simplest of scanners. On a more advanced system aimed specifically at echocardiography, they can seem downright alarming! However, I have found that the vast majority of improvement one can achieve will be provided by adjusting just three things:

1. **Colour Gain**: For any particular probe in your arsenal, the colour gain should only need to be set once, assuming no button-happy colleagues decide to unleash their 'talents' on the scanner. The trick is to wipe the probe face clean of any gel, spirit, other detritus, and scan 'air'. Whilst scanning 'air', turn the gain up to maximum (having first activated CFM mode, of course!), and you should notice the colour box becomes filled with a sparkling mosaic of colour. Slowly turn the gain back down until the speckle **just** completely disappears. (i.e., you want to see no random speckle at all, but once you reach that point, don't turn the gain down any further.)
2. **(Doppler) Frequency**: The lower the frequency used for CFM, the smaller the Doppler shift will be. This is great if the expected speed of flow in the region you're scanning is going to be quite high, as it will reduce the likelihood of aliasing. However, it will make the technique less sensitive to lower-speed flow, which may then be missed. The key is to adjust the frequency to avoid aliasing – the appearance of a random mosaic of red and blue colour within the same region – whilst at the same time maximising sensitivity to flow. This usually requires a bit of experimenting for every different region that you image.
3. **Scale (a.k.a. pulse repetition frequency, PRF)**: The so-called Nyquist Theorem (more accurately, Nyquist-Shannon Theorem) tells us that in order to be able to derive the Doppler shift (and thus the velocity of flow) of a region of flow, we must sample the speed of that flow at least twice as often (i.e., at double the frequency) as the frequency of the shift. For the sake of argument, if we are to detect a Doppler shift of 10kHz, we would need to sample that blood flow **at least** 20,000 times per second. Given the (almost) constant speed of sound in tissue, there is a hard limit on how often this sampling can be done at a given depth (as it takes a finite amount of time for the sound pulse to do the return trip), and this can result in the Doppler shift frequency exceeding half of the sampling frequency. In order to minimise the chances of this happening, we as the user can control the sampling frequency within a limited range. The sampling frequency (called the pulse repetition frequency, or PRF in Doppler ultrasonography) is often labelled on scanners as "scale" (or PRF), and will usually have units of velocity (i.e., cm/s or m/s), though frequency (in kHz) is also used sometimes. Setting this to be appropriate for the expected speed of flow in the region we're imaging will have a similar effect as adjusting the frequency as described above.

And that's it! As I mentioned at the beginning of this section, there is a huge amount of extra 'tweaking' that can be done, but if you can set gain correctly, and then master adjusting the (Doppler) frequency and scale, you will find that you reap the most significant improvements you're going to get with only minimal effort.

Summary

Colour Flow Mapping is a hugely useful technique that can help in a wide variety of ultrasound imaging situations, and now that the technology has become so widespread, there's really no excuse for not giving it a go.



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Recollections 48 - An Exceptional Meeting

Ian du Toit

At 6 am the air coming off the cold Atlantic Ocean was quite cool, even early in April. I shivered as a drop of icy water from the damp air found its way into my neck and trickled down my back, so I pulled the collar of my jacket up closer, while I walked slowly along the waterline of the Noordhoek beach, leaving a row of erratic footprints in the wet sand, absently watching the small waves chasing each other in and out, unaware of the strong smell of kelp and salt in the thin wispy mist drifting in from the West or the roar of the surf in the distance. I was really unaware of anything, except my thoughts of the happenings during the astonishing experience I had had the previous day.

It was Easter Monday, 1980 and I had been attending a church camp at Noordhoek since the Thursday evening. I did not realize it then, but this weekend was going to be the climax of a search that I had been involved in for many years, fuelled by encounters I had had along the way with various people, who had somehow discovered a reality in their spiritual consciousness that I longed for.

Challenged by the reality of my visit to Israel which I have written about before. I have mentioned a number of times how I had glimpsed this apparent spiritual reality in others, like Joseph, who I had met in the caravan park at Heidelberg, many years before, who spent every lunchtime pouring over his bible and somehow communing with his "Friend" Jesus, through it.

So in my further pursuit of a deeper understanding, I had joined a retreat lasting the whole of the Easter weekend, at a campsite in Noordhoek. The teaching had been inspiring and the beautiful worship songs and times of prayer had brought a real feeling of joy and reverence. During the breaks we were soon united in the pursuit of deeper understanding. Sharing fellowship at mealtimes and gathering in groups to pray in between, we found ourselves drawn together and moving forward to a common goal.

Although I had high expectations, I didn't realize that I was coming closer to reaching the climax of my search. Looking back I can see how there was a Higher Hand guiding me through a number of milestones along the way over many years. What I also had not anticipated, was that what I had set as a goal, was rather going to be a golden gateway to a totally new life than an end in itself.

Earlier that year Emily and I had been drawn to attend a "renewal meeting" at St Mary's, the little thatched roof church on the Braak at Stellenbosch. It was a Friday evening and as we walked across the grassy expanse of the Braak towards the church there was already a crowd of people gathering, with an excited buzz of expectation that one could sense, in the air. We were just in time to wiggle our way into the cramped space inside. I was surprized to see a small reedy orchestra in front, near the usual church organ. I recognized Marge Hunter with a violin in her hand. The crowd pushed and elbowed their way in, filling even the aisles and at the door people were craning their necks to see and hear the proceedings, standing 6-10 deep.

As the music started, I was enthralled at the beautiful catchy tune and the thin sound of the orchestra was almost immediately drowned by a swelling chorus of voices which seemed to be in danger of lifting the roof off the building. Bishop Bill Burnett was the speaker and soon you could hear a pin drop as his voice swelled and thundered as he preached the "Good News", which I had never heard presented like that before. Slowly things were falling into place in my mind, making real sense for the first time, despite having attended many church services before.

An hour later, after another song or two it was all over. Everywhere around us people either sat rooted to their seats in wonder or embracing each other. Many had tears in their eyes and others were just continuing singing the beautiful songs we had just shared as they struggled to get out of the crowded interior.

As we made our way out of the building into the warm summer's evening we could see groups of people disappearing into various directions but, amazingly many were still singing some of the songs we had just been singing. The air was filled with delightful, joyful music which simply lifted our hearts as the twilight settled onto us.

Emily and I made our way to the Spur steakhouse, as we had arranged beforehand. There we just sat for a while, rooted and wordlessly looking at each other. We knew we had experienced something which would change our perspective on life dramatically. Emily told me much later that that was the night that her life was totally changed.



Meanwhile my veterinary work remained a priority. Our practise was being faced with a new challenge. The municipality informed us that there had been complaints by other residents about our use of a residence in the town to practise from, even though it was only three stands away from the nearest businesses and they required us to find other premises. This ended up really in our favour because we were able to persuade them to rent a building to us, which had previously been a small post office and which also belonged to them and was standing empty. It was empty because all the buildings around it had been demolished as the coloured folk who had previously lived there had been moved to a suburb on the edge of the village, called Cloetesville.

The building was ideally situated next to a street and near the centre of town. The only disadvantage was that there was just a vast area of dry, dusty soil around it where the houses that had once stood there had been demolished. The only other activity was a corrugated shed surrounded by roof-high weeds and a number of old motor vehicles over the road, set back some 50 m, next to a high wall, where someone was working as a backyard mechanic.

The building itself was strong and ideal in size, but required quite a bit of cleaning up. However that enabled us to negotiate a very economic rental and a 10 year contract. The area around us was rather bleak though and our afternoon receptionist used to lock the door tightly and pull up her collar till we opened for our consultations, especially in the summer when the South Easter would whine around the corners and kick up clouds of dust and weeds, tumbling them across the brown sand.

One Friday morning, some two years after we had moved in there, I was standing in our consulting room, outside consulting hours, when 4 men, dressed in suites walked in asking to see me. Introducing themselves as coming from some construction company they asked me if I had heard rumours that there was going to be a shopping centre built on the open ground. I affirmed that there was a rumour like that going around. They then asked me if they could show me the plans for the development.

Explaining in detail all the planned buildings they were going to erect, which I obviously found very interesting, they finally asked me "Did you notice that your building is not on our plans"? As said "yes now that you mention it", the apparent senior of the group then asked me "So what are you going to do about it"?

Initially completely taken aback I didn't quite grasp what he was saying, but later realized they were trying to bully me into giving up our most convenient premises. I put it to him that if they wanted us to move they would have to provide an alternative premises for us. They were clearly not going to do that and just walked out. For the next few weeks I received several phone-calls from them with the same question, but we had no intention to budge.

Then the crunch came. We discovered that we were not only hiring the building we were using, but a large plot of ground behind it. Although it was situated in what was going to be a large parking area, the company could not develop that ground without our agreeing. To put the cherry on the top they would not be able to give Pick and Pay access to their loading yard without crossing our "plot". Although we didn't get a new building we did negotiate that they provide a large private parking area for the exclusive use of our clients outside our building and a new ten year lease.

On top of that, some 18 months later we found ourselves in an ideal spot in the parking area of a large shopping centre, with our own parking area. No more dusty wind-blown, weedy area around us, now a bustling shopping hub. The building is still being used, some 40 years later, after several upgrades, by our colleagues who took over the practise and is now a thriving Veterinary Hospital.

Looking back over the years this was just another wonderful way that Jesus guided me and led me on a path which I am still walking today. One of the books I had read while on my quest to meet Him was called "the Helper" and Catherine Marshall, the author, had asked the question at the beginning of the book: "Do you find God leading you daily and being able to communicate with Him?" That was so much what I wanted that paradoxically, I didn't read any further because I was afraid I somehow would not qualify.

As I walked along the beach at Noordhoek that early morning my mind was still transfixed by everything that had happened since Thursday evening, but especially by a life-changing moment the previous morning. We were having a Sunday service and while Angus Bain was speaking, he spoke of "unbelieving believers" and suddenly I knew that was me he was talking about.

Even as he spoke an overwhelming sense of the reality of God came over me. It was as if I could see Jesus standing in the room with us. In a moment, the intellectual decision I had made some time before to believe in Him moved from my mind to my heart, to the very centre of my being. I knew that God and His Son Jesus are real. I knew that I knew that He was real. My whole being was flooded with a certainty and an enormous peace and joy came over me.

The rest of the day passed like a dream. Everything was different. It was as if I had been living in a black and white version of my life till then and now it was flooded with full colour. It was as if I had been looking at this black and white picture on my wall and now a window had opened and I was able to see, feel, smell and experience the real thing in all its dimensions.

I didn't feel the cold that morning on the beach and was not aware of the strong smell of the sea and the roar of the surf, because I was speaking to my new "Friend". Feeling a stray roll of sweets in my pocket I took it out and as I took one, I had the momentary urge to share it with Jesus. That is how real He was to me. I would almost have expected to see a second row of footprints in the wet sand next to mine behind us, if I had looked back.



So my life was launched on a new trajectory, with a new purpose which is still my driving force 40 years later. Wait, let's speak more next time.

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DAY 01 | *FRIDAY, 15 OCTOBER*

08:00	Registration
09:00	Welcoming
09:15	Rumen development pastures and disorders *- Dr Willem Schultheiss*
10:15	TEA
10:45	Femur amputations/pinning long bones *- Dr Neels Du Plessis*
11:45	How does acidosis impact fertility? Bull focus *- Dr Willem Schultheiss*
12:45	LUNCH
13:45	Ex fix approach for rural vet - *Dr Neels Du Plessis*
14:45	Scanning for colic - *Dr Arnold Mahne*
15:30	Practical - Horse Scan
16:30	AGM SAVA
17:30	Braai

DAY 02 | *SATURDAY, 16 OCTOBER*

08:00	Tea/Coffee
08:30	Rural colic diagnosis & treatment options *- Dr Arnold Mahne*
09:30	*S.lupi*: Rural Diagnostic approach & treatment *- Dr Rhynardt de Ridder*
10:15	TEA
11:00	Diarrhoea and snap tests - *Dr Rhynardt de Ridder*
12:00	Heritable/Non-heritable hoof problems *- Jaco de Bruin*
13:00	Practical Demo - TBC

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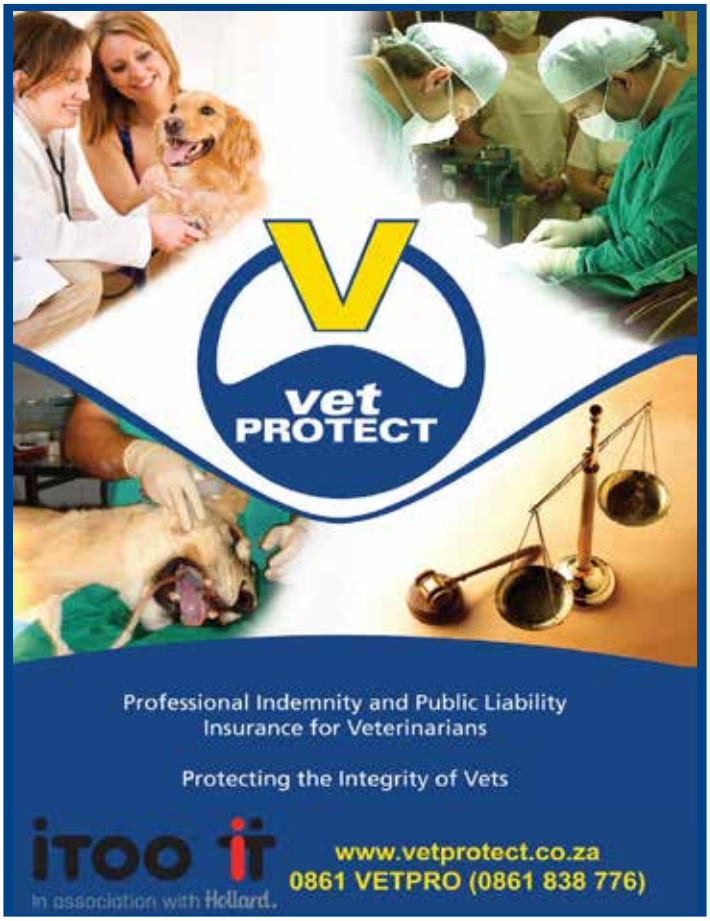
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For applications, contact our PM Stephanie at stephanie@animaloptionsvetclinic.com.au

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Life plus 21 without parole



Mike Lowry

Mike Lowry has been in veterinary practice for "life plus 21" years. In this column, he shares his experiences and opinions.

What a month it has been. Covid has stuck its head out very intensely and Natal and Gauteng have gone up in flames.

The debate about Ivermectin rages on with some scientists giving severe warnings of liver damage with repeated use. Others say it helps against the virus. Do we know? Roundup years back was proclaimed to be so safe you could drink it. Now there is adequate evidence that, in fact, it is an extremely dangerous product and may well be responsible for the increasing incidence of autism and cancer in the population of the United States.

Covid has claimed many people. We have a wedding venue on our farm and a delightful, 26-year-old lady booked for a wedding. Everything was prepared and, on the Wednesday before the Saturday wedding she phoned to say she had tested positive for Covid and obviously could not go through with the otherwise well-planned wedding.

On Sunday, she, her father and her mother were dead leaving an absolutely devastated bridegroom.

Janet (not her right name) had been a client for the past 15 years. Her calls were routine every Thursday; she came in for dog food and only purchased enough for a week. We had discussed this and decided that part of it was that she loved to pop in. She was a healthy 63-year-old who played tennis regularly and was obviously a social butterfly.

I had chattered to her on the previous Thursday when her husband called in for the food and mentioned that she had taken ill on the Saturday and by Tuesday had passed away.

We all know the trouble our very dear friend and colleague Faffa has been through. Thankfully he is on the mend. We all wish him well and hope his recovery is complete and speedy.

Then the riots.

We woke on Monday morning to a complete state of panic in Natal. There were riots everywhere and the heavy smoke cover indicated the fires. The farmers in our valley ever resourceful had got together to plan the way forward. Many are ex Rhodesians and had been through much worse than what we had started with. However, this experience resulted in a lot of over reaction. Escape routes were planned as were safe houses and what people needed to take with them – passports, vaccination documents, assorted clothing and the family photographs.

The security situation in my practice is excellent and I had closed that for the day.

The day passed slowly with all sorts of possibilities being discussed. My son-in-law is involved in the business forum in Pietermaritzburg, and they were going through a torrid time with shopping centers being looted and set alight. The entire main shopping road in Pietermaritzburg was destroyed.

Monday night saw the farmers rallying and setting up roadblocks. Despite this, our neighbors' farm was torched and the flames could be seen for miles around. This resulted in a convoy of farmers with firefighting equipment being mobilized. Fortunately, the response was more than adequate, and the fires were rapidly brought under control. An anxious night was spent with cell phones and radios constantly relaying the situation.

Tuesday dawned and all around us was quiet, and our staff had also had a normal night and were far more cheerful than they had been. Headed back to my practice to experience an amazing day with a bigger than normal turnover which was largely related to panic buying. The rest of the week was the same. On Thursday, on my way to work the biggest of all the looting had started at a warehouse close to the N3 just beyond the Petroport at Cato Ridge. The vehicles were backed up for miles; all new and everyone with number plates that had been carefully covered with a cloth that hid the numbers. As I concernedly drove through this crowd I was happily waved on by the looters; fridges, microwaves, tv sets, and all. There was not a single policeman in sight and the normally present traffic cops were obvious by their absence. There was no violence at all.

Towards the end of the week, things were returning to normal but for the trash that was everywhere. Evidence of home patrols and taxi drivers helping people and shops in need was very evident and for once the taxi industry was being blessed rather than cursed.

It was evident that Mr. and Mrs. South Africa, yes, the people in the street had stood together to protect one another and had done a remarkable job.

Then the clean-up started and it was even more amazing how everyone lent a hand to clear the sizable mess. The people of South Africa had won the day!

Second Chances

And then an amazing story was told. A man driving to work in or around Pretoria went under one of the Gautrain bridges and heard a severe knock on the back of his bakkie. He had not seen anything and to the best of his knowledge had not driven over anything that could have caused the noise. He looked back in his mirror and there, lying in the road was the body of a young white lady. He stopped his vehicle and ran to help her. She was shocked but conscious. He helped her up and it was obvious that she had a fracture of the lower leg. An ambulance arrived and she was taken off to hospital but not before she had told him that she had jumped from the bridge and had hoped to have been killed by his vehicle.

This news troubled the driver and he decided he needed to visit her in hospital. This he did and found out that she was just 20 years old. Her father had had severe Covid and was battling to regain his health. Her mother had been diagnosed with aggressive breast cancer and what makes this story pertinent is the fact that the last straw for her was that her application to Onderstepoort as a student had been rejected.

How much does one have to endure?

The good part of the story is that her mother has regained her health and the cancer was not as aggressive as was originally thought; her father has regained his health and is back on his game farm. The young lady's leg has healed, and I am sure she will have another go at getting into Onderstepoort – many don't make it on the first try!!

Keep well and chin up.

Dagboek • Diary

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- **49th Virtual PARSA Conference.**
  14-16 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.**
  POSTPONED DUE TO COVID-19
  20-22 September (Postponed to May 2022)
  Venue: The Boardwalk Hotel, Port Elizabeth
  Info: Madaleen Schultheiss, Vetlink, 012-346-1590, www.vetlink.co.za

October 2021

- **Eastern Free State Branch Congress.**
  15-16 October
  Venue: Golden Gate Hotel, Clarens
  Info: Madaleen Schultheiss, Vetlink, 012-346-1590, www.vetlink.co.za

November 2021

- **Virtual AOAC Sub-Saharan Annual Congress.**
  08-11 November
  Info: corne@savetcon.co.za

- **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





SAVA
South African Veterinary Association
Suid-Afrikaanse Veterinêre Vereniging

MISSION STATEMENT

"The South African Veterinary Association aims to serve its members and to further the status and image of the veterinarian. We are committed to upholding the highest professional and scientific standards by utilising the professional knowledge, skill and resources of our members, to foster close ties with the community and thus promote the health and welfare of animals and mankind".

Servicing and enhancing the veterinary community since 1920!

Tel: 012 346 1150
E-mail: vethouse@sava.co.za
www.sava.co.za



SAVA
South African Veterinary Association
Suid-Afrikaanse Veterinêre Vereniging

SAVA Community Veterinary Clinics

SUBSIDISE A PET STERILISATION PROJECT



Sade
(6-month-old
Female Terrier)

CVC Distributor: West Coast CVC

Owner Name: Jan de Wee (photo with neighbours child that Liza loves!)

Owner Income: No work due to no holiday makers on the West Coast

Lives in: Hopefield, West Coast

Dog Sterilisation: R 550

Did you know that your donation is tax deductible? For your 18A Tax Certificate, please email us at cvcmanager@sava.co.za

- Date of EFT
- Amount
- Reference used on EFT
- Your Name
- Address
- Tel Nr

SAVA Community Veterinary Clinics

ABSA Bank Brooklyn (632005)
Account Number:
4056 779 023
Swift Code: ABSA ZAJJ
Reference:
"Steri Sade" and your name
Also available PayPal & PayFast!

SAVA-CVC supports vets that provide primary animal health care (vaccinations, deworming as well as tick and flea treatments, sterilisations) to pet owners in lower-income communities at affordable prices.

These CVCs (Community Veterinary Clinics) prevent the problems that animal shelters often have to respond to such as overpopulation and diseases like tick bite fever or parvovirus.

"Subsidise A Pet Sterilisation"
Our responsible pet owners can often afford vaccinations, deworming and tick and flea treatments but the cost of sterilising their pet is beyond their means. Please look at our list of pets that have been nominated by the vets for sterilisation – you can subsidise the sterilisation of a dog for R550 and a cat for R300!

For more information please go to Facebook page, https://www.facebook.com/communityvets or email us on cvcmanager@sava.co.za