

# Paws claws and judder things

August 2020



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## Welcome

Welcome to a new edition of our newsletter.

This month we have a health warning from MPI, updates from the lab, some "fake" haematology news to keep you on your toes, a great Case of the Month and plenty more.

Please just call us on 0800 GRIBBLES if you need our help with anything.

Kind regards,  
[Karen Cooper](#)  
Marketing Administrator

## Emerging animal health issue

The Ministry for Primary Industries have contacted us regarding an emerging animal health issue relating to *Salmonella* Bovismorbificans.

Salmonellosis has long been recognised as an important cause of disease in cattle. However, based on the information MPI collects from the New Zealand's veterinary diagnostic laboratories, they have noticed an increase in the reported incidence of Salmonellosis in dairy cattle since 2015, most notably involving the serotype Bovismorbificans.

Prior to 2015, *S. Bovismorbificans* was a rarely reported serotype in cattle (2003-2014 n=8). Since 2015, they have noted an increase in reported cases (2015-present n=834).

Because their data relating to impact relies on the information provided in veterinary submission forms (and some fields are often not completed), it is difficult to make an estimate regarding the impact of this serotype on the outbreak farms.

Sporadic cases and outbreaks have been reported in both adult dairy cattle and in calves. While cases do get reported year round, the majority occur in spring with a smaller peak occurring early autumn.

Most regions of the country have experienced cases, but the main areas from which cases have been reported are the Waikato, Manawatu-Whanganui and Taranaki, with increasing reports of cases also from Canterbury and the Bay of Plenty.

The extent of the issue is difficult to estimate in sheep, due to a limited amount of data; but, it is clear that there has been an increased number of reports in this species

also.

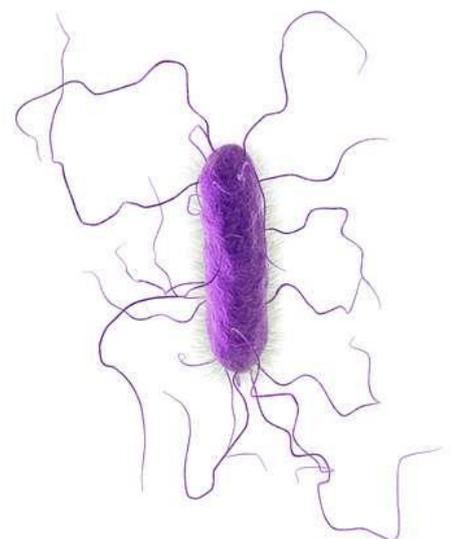
To help MPI better understand the impact of *S. Bovismorbificans*, we ask veterinarians to ensure they complete **ALL** the fields on laboratory submission forms, especially the fields that relate to number of animals at risk, number affected and number dead.

Along with this increasing trend in animal cases, ESR has reported cases of *S. Bovismorbificans* in humans. This emphasises the importance of this organism (and *Salmonella* generally) as a zoonotic pathogen and a potential risk to those working with affected animals.

MPI recommends farmers seek veterinary advice about *Salmonella*, including vaccination, and the ongoing need for good farm hygiene practices.

If you missed it, also see the article [on our website](#) from last month's newsletter regarding *Salmonella* abortions in cattle. If you have any questions or require further information, don't hesitate to give your local pathologist a call to discuss:

**0800 GRIBBLES**



## Change of owner

As of Tuesday 4 August, Healthscope has entered into a binding agreement to sell its New Zealand pathology business, Asia Pacific Healthcare Group (APHG) to the NZ Super Fund and Ontario Teachers' Pension Plan (Ontario Teachers') who will each take a 50 percent stake.

While the sale contract has been inked this week, completion will occur in 3-4 months' time. The current management team will stay in place under new ownership.

APHG is New Zealand's largest human and veterinary pathology network operating as Labtests Auckland, Northland Pathology, Taranaki Pathology Services, Southern Community Laboratories, Wellington SCL, Canterbury SCL, Medlab South & Gribbles Veterinary Pathology. With 25 laboratories, over 2,000 staff and 150 collection centres throughout NZ, APHG performed over 6.7 million pathology patient episodes across New Zealand in 2019.

I want to assure you that you can expect our business to continue as usual, we have been through a similar transition previously and are well equipped to ensure this process is smooth for our staff and our valued customers.

We view the change to partial local ownership as a positive development for our business. There will be no change to staff or management as a result of the ownership change and we will continue to provide high quality services our customers across New Zealand. Importantly, we will have our own identity as a standalone organisation and not a subsidiary of a larger company.

Please feel free to ask any questions you or your wider team have. I am happy to answer those as they arise, and my email address, should you require it, can be found below.

**James Richardson**  
**General Manager**

james.richardson@gribbles.co.nz

## Off-shore testing issues

There are several tests we offer that are not available in New Zealand and we must refer overseas for testing. All things being equal, the export of samples and receipt of results has been honed to a smooth operation. However, as we all know, life in the time of COVID has left many things far from equal.

Since the COVID-19 pandemic created chaos world-wide we have (unsurprisingly) had issues when sending samples overseas

for testing—courier issues and customs clearance issues predominantly. Unfortunately we are subsequently having trouble tracking down missing samples once we are aware they have not reached their destination.

Given this current unreliable service, we **do not recommend** submitting samples that require overseas testing.

The following tests will be affected:

- Allercept serum IgE allergy testing
- Acetylcholine receptor antibodies (Myasthenia gravis)
- Adrenal panel (for atypical Cushing's disease in dogs)
- Canine insulin

- *Encephalitozoon cuniculi* serology
- Erythrocyte pyruvate kinase deficiency
- Lupoid dermatosis
- Feline TLI
- Fucocidosis
- Hyperuricosuria
- Inhibin
- Mast cell tumour panel
- Masticatory muscle myositis (2M antibody)
- Mycobacteria PCR
- Pachecos PCR
- PKD PCR

If you have any questions or would like further information, please just give us a call at any time on 0800 GRIBBLES. We're always happy to help.

## Case of the month

**JOHN GILL**

### Clinical history:

A 6 year old cow presented with an unusual thickened alopecic skin lesion covering most of its face (see photo right).

Samples were submitted to the laboratory for histopathology.

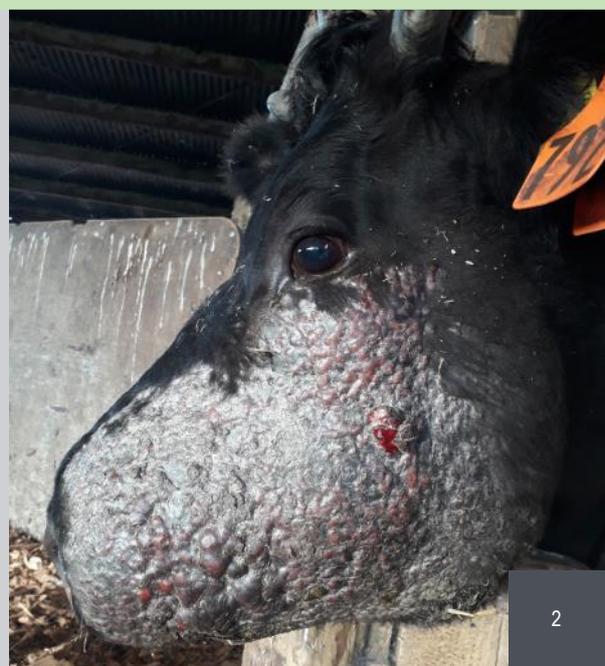
### Histopathology results:

A biopsy revealed a granulomatous lesion

consisting of neutrophils, surrounded by large macrophages and marked surrounding fibrosis. The occasional club colony found in the centre of a few of these foci.

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*Thank you to Anna Burrell from Clutha Vets, Balclutha for sending in this great photo from an interesting case.*



# When neutrophils are faking it

KATHRYN JENKINS

When performing in-house haematology, or requesting a CBC from a reference lab, preparing a fresh blood film is important to help correctly identify an inflammatory response, and provides valuable prognostic information.

A recent study demonstrated the startling artefactual changes that occur to neutrophil morphology with prolonged sample storage. The appearance of cytoplasmic Döhle bodies can result in a false classification of toxic change in blood films made from stored blood, within as little as four hours after sampling<sup>1</sup>. This can lead to an erroneous assumption of the presence of a significant inflammatory response in the patient.

In companion animals, a classic inflammatory leukogram comprises neutrophilia with a left shift. The left shift refers to the presence of increased numbers of immature neutrophils in peripheral circulation, which are most often bands. Band neutrophils are characterised by a horseshoe-shaped nucleus, with smooth borders (Figure 1). The presence of even earlier precursor neutrophils (metamyelocytes or myelocytes) indicates more severe inflammation.

A left shift is often accompanied by so called 'toxic change'. These are cytoplasmic morphologic features seen in neutrophils as a result of accelerated maturation through the bone marrow, in response to inflammatory cytokines. The presence of true toxic change in neutrophils has been associated with a poorer prognosis in dogs, cats and horses, including longer hospitalisation, increased treatment costs,

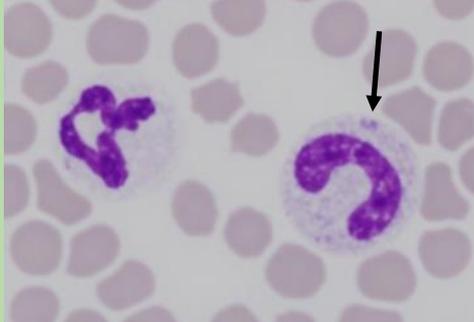


Figure 1. Band neutrophil (right hand cell) with toxic change in a dog. Toxic change includes Döhle bodies (arrow), cytoplasmic basophilia and foamy vacuolation.

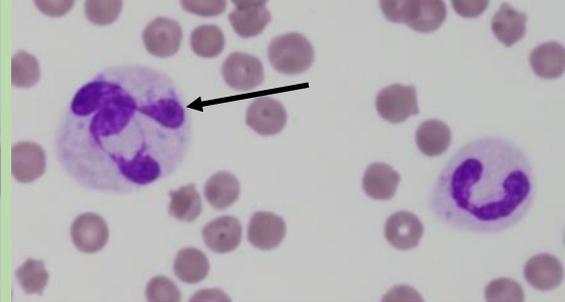


Figure 2. Toxic change in a cat. Above, giant neutrophil (arrow) and right, donut ring-shaped nucleus.

and higher risk of mortality<sup>2,3,4</sup>.

Toxic changes are considered biomarkers of inflammation. Most commonly, these include increased Döhle bodies (small light blue-grey, oval to amorphous intracytoplasmic inclusions of endoplasmic reticulum), cytoplasmic basophilia, and foamy cytoplasmic vacuolation (Figure 1). Giant neutrophils and ring-shaped (donut) nuclei, are more commonly seen in cats and horses (Figure 2). The least common toxic change, is toxic granulation (retained primary granules), which indicates severe inflammation.

Storage changes in neutrophils that can mimic both toxic change and a left shift, include small Döhle-like bodies, crisp cytoplasmic vacuolation, and nuclear swelling (Figure 3). Storage change also affects other cell lines including increased haematocrit, increased MCV\*, decreased MCHC\*, and echinocytosis in erythrocytes. Platelets can also appear swollen and pale, increasing MPV\* and making them harder to identify on film reviews. Storage changes can be avoided by making a fresh blood film at the time of sampling.

Making a blood film gets easier with practice. Refer to our webinar on [‘The secret life of blood smears’](#) or see the Cornell University short instructional video on [how to make a blood smear](#) for some more great tips<sup>5</sup>.

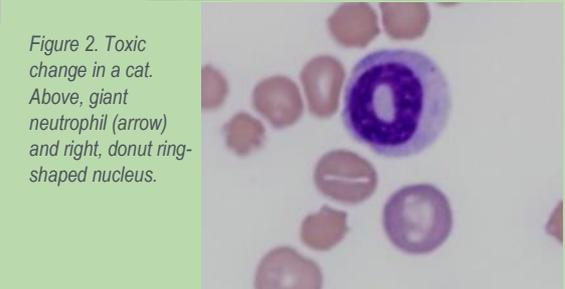


Figure 3. Storage artefact in neutrophils, showing crisp cytoplasmic vacuolation with swollen nuclei.



\*MCV: mean corpuscular volume  
\*MCHC: mean corpuscular haemoglobin concentration  
\*MPV: mean platelet volume

## References

1. Effect of time and storage on toxic or pseudo-toxic change in canine neutrophils. Bau-Gaudreault L, Grimes C. *Vet Clin Pathol.* 48:400-405, 2019.
2. Toxic Neutrophils in Cats: Clinical and Clinicopathologic Features, and Disease Prevalence and Outcome—A Retrospective Case Control Study. Segev G, Klement E, Aroch I. *J Vet Int Med.* 20:20-31, 2006.
3. Clinical, Biochemical, and Hematological Characteristics, Disease Prevalence, and Prognosis of Dogs Presenting with Neutrophil Cytoplasmic Toxicity. Aroch I, Klement E, Segev G. *J Vet Int Med.* 19: 64-73, 2005.
4. Association of Presence of Band Cells and Toxic Neutrophils with Systemic Inflammatory Response Syndrome and Outcome in Horses with Acute Disease. Lambert JL, Fernandez NJ, Roy M. *J Vet Int Med.* 30:1284-1292, 2016.



## Farewell Jack

After almost 10 years of service as a Business Development Manager with Gribbles Veterinary, we have said goodbye to Jack Gillman.

Jack will be a familiar face to our southern clients after travelling the South Island

visiting and supporting clinics over the years. We would like to thank Jack for his contributions to the business and dedication to our clients, and we wish him well with his next adventure.

South Island clients can contact their local laboratory or Chrissy Bray on 027 569 1169 with any questions or issues.

## Snippets

- **Axing the fax**—Just a reminder that as of the end of August, we will no longer be able to send or receive faxes. If you still receive laboratory results via fax, you will be contacted by your local laboratory staff to ensure you are able to receive results solely via email instead.
- **Apologies** to anyone who has experienced issues with our website this past month. Our website was moved to “the cloud” at the beginning of July to increase security, improve performance and enable better support and monitoring, but we have struck some unexpected glitches. We thank you for your patience while we get these issues resolved.



## Case of the month

### CONTINUED FROM PAGE 2

**Diagnosis:** *Actinobacillus lignieresii* infection.

**Discussion:** *A. lignieresii* is normally found in the oral cavity but can cause soft tissue infections following epithelial damage associated with rough feed material e.g. containing sharp stems or thorns. Skin

lesions are common, with tumorous abscesses of the tongue (cattle) and lip lesions (sheep). Soft-tissue or lymph node swelling accompanied by draining tracts are observed also in the head and neck regions, as well as other areas. The swollen tongue may protrude from the mouth causing difficulty eating, anorexia, and excessive salivation.

In this case, organisms entered the skin through an area where there were abrasions following trauma.

## Winter NSAID monitoring

A reminder that this winter, we have a special offer for monitoring renal and liver function in animals on non-steroidal anti-inflammatory drug (NSAID) therapy.

Monitoring organ function when patients are prescribed long term NSAID therapy is integral to the safe and effective use of NSAIDs for chronic pain management. In animals that are at a high risk of NSAID related adverse effects, regular monitoring at 1-2 monthly intervals is recommended.

Frequent monitoring is also recommended in older animals and

those with a progressive or unstable underlying disease condition.

Monitor your arthritic patient's health status this winter (available until 31 October) with our **NSAID panel** (ALP, ALT, urea, creatinine):

**Special offer** - NSAID panel + free urine specific gravity only \$22.66 (excl. GST)\* which is a significant discount off our list price. Simply quote **NSAID2020** on your submission form to participate.

We also have digital marketing collateral available to support your clinic's NSAID testing promotion. Ask us for [social media post graphic](#) and/or a customisable [client flyer](#) and we can send these to you free of charge for clinic use.



**Gribbles**  
VETERINARY

## Contact us

Contacting Gribbles Veterinary couldn't be easier.

### EMAIL

auckland.vetlab@gribbles.co.nz  
hamilton.vetlab@gribbles.co.nz  
palmerston.vetlab@gribbles.co.nz  
christchurch.vetlab@gribbles.co.nz  
dunedin.vetlab@gribbles.co.nz

### PHONE

0800 474 225

### WEBSITE

[www.gribblesvets.co.nz](http://www.gribblesvets.co.nz)

### FACEBOOK

[www.facebook.com/GribblesNZ](http://www.facebook.com/GribblesNZ)

Last but not least, please feel free to contact your local territory manager:

- Rachel Whitehead - Category Manager, Production animals  
[Rachel.whitehead@gribbles.co.nz](mailto:Rachel.whitehead@gribbles.co.nz) - 027 604 8690
- Chrissy Bray - Category Manager, Companion animals & Analytical  
[Chrissy.bray@gribbles.co.nz](mailto:Chrissy.bray@gribbles.co.nz) - 027 569 1169
- Deborah Bass - Territory Manager  
[Deborah.bass@gribbles.co.nz](mailto:Deborah.bass@gribbles.co.nz) - 027 476 7714
- Eugene van Niekerk - Territory Manager  
[Eugene.vanniekerk@gribbles.co.nz](mailto:Eugene.vanniekerk@gribbles.co.nz) - 027 250 1647