

# Newsletter

## American foulbrood and European foulbrood disease

No Bees, No Pollination, No Honey  
The importance of routinely screening  
all of your hives.

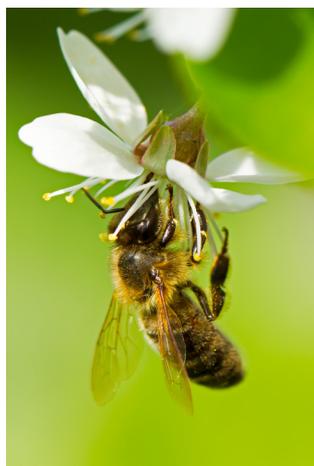


Two major fatal bacterial diseases of honey bee brood in Australia are American foulbrood (AFB) disease - *Paenibacillus larvae* and European foulbrood (EFB) disease - *Melissococcus plutonius*.

These bacterial diseases can be easily missed by visual inspection in the early stages. Therefore, testing of bees and honey is critical in the successful management of hives. Spores from American foulbrood disease can remain viable for more than 50 years in the environment, and as such, disease can strike at any time.

Gribbles Veterinary Pathology offers testing to diagnose and confirm the presence or absence of these bacterial diseases.

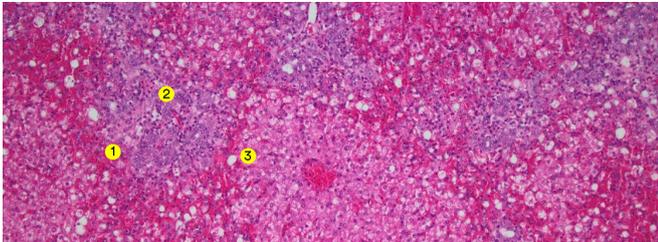
Our testing is specifically designed to detect AFB disease in honey samples, as well as both AFB and EFB disease in larvae. Every hive should be tested twice a year prior to the pollination stage.



If AFB and EFB spores are present in the honey, even at low levels, this can be detected by scientists in the laboratory. Results provided from the lab will indicate a +1, +2 or +3 result if positive. A higher concentration of spores may indicate a higher likelihood of American foulbrood disease being present, or that the apiary has a recent history of the disease.

Smears of dead and sick larvae can be submitted to confirm the presence AFB and/or EFB and *Paenibacillus alvei* (a secondary invader associated with European foulbrood disease). These smears will be prepared and reviewed by a scientist in the laboratory who will thoroughly examine the smears for the distinctive organisms and report if they have been detected or not. Thus testing for AFB and EFB can protect apiarists' hives and pollination for the future.

In April, a property in the South East of SA experienced 11 steer deaths in 24 hours. The steers were purchased from NSW in October, 2018. The steers had moved paddocks two days before death. The provisional diagnoses were plant/lead toxicity, hypomagnesaemia, Clostridial disease and Pestivirus. A comprehensive suite of samples were submitted from one of the steers including fixed brain, mixed viscera, spleen, kidney, heart, lung, blood and ocular fluid. Biochemistry revealed elevated liver enzymes and the histological lesions observed within the liver of this steer (acute periportal necrosis and haemorrhage) were considered most compatible with a diagnosis of 'acute bovine liver disease' (ABLD), or possibly some other hepatotoxic agent (plant or mycotoxin). There have been recent detections of ABLD, previously known as phytotoxic hepatitis, in areas of Victoria bordering SA. This disease



Liver histopathology of (1) periportal necrosis, hepatocyte loss with replacement haemorrhage, (2) marked biliary hyperplasia, and (3) centrilobular vacuolar degeneration. This zonal pattern of necrosis is compatible with the diagnosis of 'acute bovine liver disease' (ABLD).

appears to occur following a distinct weather pattern: a dry period, then sudden rain in a short period of  $\geq 15$  mm, then a dry warm to cool period for about 2-3 weeks, coinciding with the introduction of cattle onto less fertile areas which have dry feed containing a highly toxic fungus on the standing heads of the plant 'Rough Dogstail' (*Cynosurus echinatus* L.). It takes approximately 2 weeks to propagate before producing a very harmful liver toxin. Often only a few cows are affected (<30% death) and other clinical signs may include photosensitization, pyrexia, milk production loss and depression. Currently there is no treatment for ABLD. It is important to consider ABLD as a differential diagnosis when undertaking sudden death

investigations in cattle, particularly following the distinct weather patterns mentioned above. Specimens needed for diagnosis are formalin fixed liver and blood collected in both EDTA and plain tubes, however in cases of sudden death a more comprehensive suite of samples is recommended. Contact your local government veterinary officer in cases of sudden death, as subsidies may be available to assist with laboratory testing.



#### References

- PIRSA Communication Update – Acute Bovine Liver Disease (ABLD), Jessica van de Weyer, April 2019  
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<https://www.examiner.com.au/story/5293952/tasmanian-farmers-on-alert-for-acute-bovine-liver-disease/>

## Senior Pet Promotion

Until 31 August 2019, Gribbles Veterinary Pathology is offering a significantly discounted price on non-interpreted blood profile (including T4) and full urinalysis, for senior dogs and cats.

To order this test please send your patient samples (whole blood (EDTA plus fluoride oxalate), serum (gel or plain), blood smear and urine) along with your submission form (available to download at [gribblesvets.com.au/veterinarians/ordering-a-test](http://gribblesvets.com.au/veterinarians/ordering-a-test))



# High Sensitivity Cardiac Troponin

Troponin-I (TNI) is a cytological protein forming part of the contractile apparatus in cardiac muscle cells. Cardiac myocyte damage leads to release of TNI into the bloodstream. Elevated TNI levels are a highly specific indicator of active myocardial damage, being found in very low concentrations in other muscle types.

## Causes of elevated TNIH include myocardial injury due to:

### Primary cardiac disease

- myocardial infarction
- myocarditis
- pericarditis
- myocardial toxicity e.g. monensin intoxication

### Non-cardiac diseases

- systemic inflammatory diseases
- chronic lung disease, pneumonia
- renal failure
- shock
- strangulating and inflammatory acute abdominal disease

## Sampling protocol

### Sample required:

Serum (gold-top gel or red-top plain tube). Plasma is unsuitable as reference ranges are based on serum.

### Minimum volume:

- 1 ml serum
- Use the same tube type (gold or red top) when serial sampling an individual patient.
- Allow the sample to clot before centrifugation and separating the serum.
- Tubes must be tightly capped for transport.
- Ship serum samples frozen if there may be a delay in transport (testing must be performed within 24 hours for refrigerated samples).

### Species:

TNIH is currently available for horses.



To order the TNIH test please send your patient serum sample to Gribbles along with your submission form (available to download at [gribblesvets.com.au/veterinarians/ordering-a-test](http://gribblesvets.com.au/veterinarians/ordering-a-test))



## Do you have questions about using pre-Vetoryl™ cortisol in place of ACTH-stimulation for monitoring Cushing's?

See the 'News' section of the Gribbles website [gribblesvets.com.au](http://gribblesvets.com.au) to download a review from Dermcare for more information.

## Total Body Function Profile (TBFP) For Cats

### **NOW INCLUDES SAA**

A Total Body Function Profile (TBFP) is the profile of choice if there is any suspicion of abnormality in organ function – either in the clinical history, or at physical examination.

To order this test please send your patient blood sample (including EDTA tube, plain or gel serum tube, fluoride oxalate tube and blood smear) along with your submission form (available to download at [gribblesvets.com.au/veterinarians/ordering-a-test](http://gribblesvets.com.au/veterinarians/ordering-a-test))

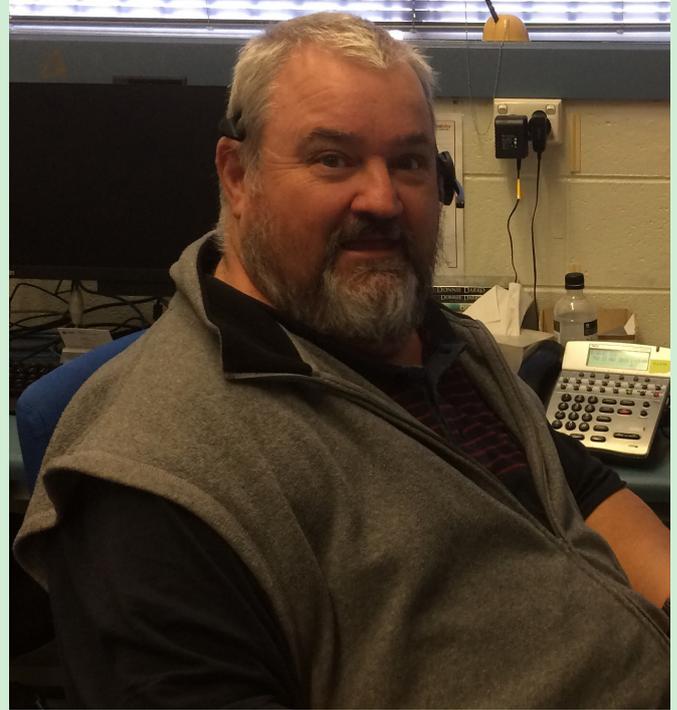


## Farewell from Lynton

Well, my friends and colleagues the time has come to say farewell and amen. It's hard to come to terms with, after working for 24 years at Gribbles Pathology and later Gribbles Veterinary Pathology, retirement time has arrived. Firstly starting in South Yarra in 1995, then moving to Clayton in 1999 and finally ending up at Glenside Lab Adelaide in 2016. I must firstly say a very big thank you to my dear friend and ever loyal and helpful colleague Leeanne Perrins, the other voice you hear when calling the Vet Help Desk.

To all our wonderful clients, it's been my privilege and honour to have been a service to you all over the years.

The thing I'll remember the most is how much support and feedback the clients have passed on freely over the years. It made my job so much easier and more importantly, enjoyable and a sense of doing the job right. You all made coming to work each day worthwhile, for that I'll always be grateful. Lastly and most importantly folks (before I start getting too teary eyed and change my mind about retirement), allow me to introduce Kate Hearn who will be replacing me on the Help Desk. She will be a fantastic asset, not only to the company but to our wonderful clients also. I know you'll welcome her to the fold with open arms and I wish her every success in her future career with Gribbles Veterinary. She's great folks, let me tell you.



Well, that's about all from me. Time to say farewell, head off in to the sunset and go and see some of the world, build a few more model aircraft (that gather dust) and enjoy what time I have left on this mortal soil.

Goodbye and thank you,  
Lynton

## Welcome to Kate Hearn

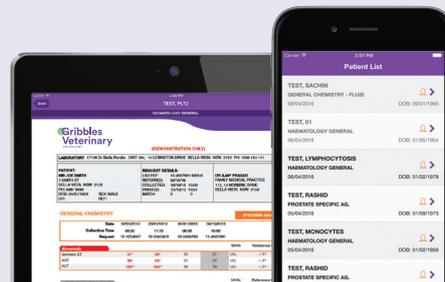
As most would be aware, for the past 6 months Kate has been working in the Glenside lab, taking the opportunity to learn as much as she can whilst under the valued supervision of Lynton.

Kate has had a number of years' experience in the field of public relations, customer service and administration. Kate comes from a background of Sales & Marketing, particularly in the retail and Pharmaceutical industry for both human and the companion animal sectors. Kate is looking forward to assisting you with your queries and will be taking on Lynton's role permanently from July. Kate's special interests include her love of animals, animal rescue and wildlife, and coaching her children's soccer team.



## eResults

The eResults app is an innovative solution that provides live access to your pathology results anywhere you go!



To get started call our Customer Service Centre on 1300 307 190 or visit [results.clinicallabs.com.au/](https://results.clinicallabs.com.au/)

