



## Newsletter 06/2017

We are pleased to welcome you to the monthly BattLab newsletter. This newsletter will bring you the latest news and information about our laboratory and all tests that we can offer to all our clients.

### BATTLAB SEMINAR

After the success of our first two seminars for 2017, we are pleased to announce the third BattLab seminar. This time we will have Tim Williams, Senior lecturer in Veterinary Clinical Pathology at the University of Cambridge that will give us a lecture on feline hyperthyroidism, from the diagnosis to treatment.



#### Tim Williams

(MA VetMB PhD FRCPATH DipECVCPMRCVS)

#### Feline hyperthyroidism: What I need to know from diagnosis to treatment

Tim undertook a PhD in the Feline Research Group at the Royal Veterinary College, London under the supervision of Professor Jonathan Elliott and Professor Harriet Syme. His research focused on feline geriatric medicine and, in particular, the effect of hyperthyroidism on renal function in cats. He received the Society for Comparative Endocrinology award for "Excellence in the Advancement in Veterinary Endocrinology" in 2011 and 2015.

There are only a few spaces available, to book your space send us an email to [admin@battlab.com](mailto:admin@battlab.com)

#### Feline hyperthyroidism: What I need to know from diagnosis to treatment

Speaker: **Tim Williams** (MA VetMB PhD FRCPATH DipECVCPMRCVS) Lecturer in Veterinary Clinical Pathology at the University of Cambridge.

Date: **Tuesday 4th of July 2017**

Program:

19:30-20:00 - Light refreshment



## Hyperthyroidism in cats

Hyperthyroidism is a hypermetabolic state caused by excessive production and secretion of thyroid hormones. It is often observed in adult/old cats, mostly due to a benign adenomatous nodular hyperplasia of thyroid, similar to toxic nodular goitre in humans.

Clinical signs vary and include weight loss and poor body condition (>80% of animals), polyphagia, vomiting, polyuria, polydipsia and diarrhoea. On physical examination, a palpable thyroid nodule is observed in the vast majority of cats; weight loss, heart murmur, and tachycardia are also a common finding.

Hyperthyroidism is usually diagnosed by documenting elevation in serum concentrations of **total thyroxine (TT4)**, a highly specific and sensitive test for the diagnosis of feline hyperthyroidism. When this is elevated (in >90% of hyperthyroid cats) it is considered diagnostic for hyperthyroidism. However, in a low percentage of cats, TT4 values may be within the reference range; this may be due to daily fluctuation of TT4 levels, the presence of a concurrent non thyroidal illness that may suppress thyroid levels, or administration of various medications such as corticosteroids or anti-convulsants. Additional tests to consider in this case that may help to achieve a final diagnosis are the **free T4 (fT4)** concentration measured by dialysis technique and/or nuclear scintigraphy. fT4 represents the unbound portion of thyroxine and is the hormonally active portion (<1% of the total); it is increased in the vast majority of hyperthyroid cats and is less influenced by non thyroidal illness than TT4. **Nuclear scintigraphy** is typically performed in specialised centres and requires radionuclides such as isotopes of iodine and technetium. Thyroid Scintigraphy provides a visual display of functional thyroid tissue following the administration of a radionuclide that concentrates in thyroid tissue.

Do you want to know more information about hyperthyroidism, from diagnosis to treatment and monitoring? Do not forget to join to our free evening seminar at BattLab the 4th of July.

For registrations send an email with your name and practice to: [admin@battlab.com](mailto:admin@battlab.com)

Our laboratory offers a **comprehensive endocrinology service for all domestic species**. For more information visit our website or contact us by phone or email.

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## Frequently asked questions

### SDMA

This month FAQ section is dedicated to **SDMA**, a biomarker of kidney function, that BattLab, in cooperation with LABOKLIN, has offered to all his clients since September 2015. The article below is a collection of answers to all the questions we get asked more often by our clients.

#### What is SDMA?

Symmetric dimethylarginine is an exogenous isomer of asymmetric dimethylarginine (ADMA), both compounds derived from the intranuclear methylation of L-arginine residues. SDMA is excreted by the kidneys and is used as a renal function tracer/biomarker to diagnose chronic kidney disease in both dogs and cats.

#### What are the main advantages of SDMA?

- SDMA is an early biomarker of kidney function; it increases with 25-40% of loss of kidney function, whereas urine concentrating ability and creatinine do not increase until at least 66% and 70% of kidney function is lost, respectively.
- SDMA is specific for kidney function and it does not seem to be affected by other factors as creatinine and urea may do (e.g. muscle mass).

#### Is SDMA a sensitive and specific test?

Yes. According to the recent literature, in cats SDMA is 100% sensitive and 91% specific for the diagnosis of chronic kidney disease, when compared with the GFR clearance test (gold standard).

#### What specimen type is needed to order the SDMA test?

SDMA can be measured on a serum sample. It is stable in blood and requires no specific handling precautions.

#### What should I do if the SDMA is increased and creatinine is normal?

SDMA is a sensitive and specific biomarker for kidney disease. Elevated SDMA with normal creatinine values are suggestive of early kidney disease. These results should always be interpreted together with the clinical context and should be accompanied by a complete clinical examination of the animal and urinalysis.

Further steps when chronic kidney disease is confirmed include:

- Investigate for underlying causes of chronic kidney disease, evaluate for proteinuria and hypertension.
- Manage by treating any identified causes and to delay progression of the disease.
- Monitor based on clinical signs with frequent rechecks.

#### In there any benefit in a patient with high creatinine values and poorly concentrated urine, testing for SDMA?

A dog/cat with increased creatinine values and poorly concentrated urine is likely to have chronic renal disease and is expected to have high SDMA results; SDMA is not needed for confirmation but is a good parameter for monitoring the progression of the chronic renal disease. SDMA, in contrast to creatinine, is not affected by changes in lean body mass, so it is a more sensitive indicator of kidney function as patients lose lean muscles when affected by renal disease and this can partially “mask” the increase in creatinine.

Our laboratory offers a **comprehensive service for biochemistry testing for all domestic species**. For more information visit our website or contact us by phone or email.

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## 60 seconds with .... CAROLINE PEACOCK (Guide dogs)

We talk to **Caroline Peacock** who is Lead Canine Services Advisor at The Guide Dogs for the Blind Association in Leamington SPA.

### How long have you been there?

I have worked for Guide Dogs for 10 years, I've been based at the National Breeding Centre in Warwickshire since I started in 2006.

### What attracted you to work for the Guide Dogs?

I am a Registered Veterinary Nurse and had worked in both charity and private practice, I wanted a new challenge and applied for the post of National Puppy Care and Welfare Coordinator, who could resist seeing over 1000 puppies each year all destined to become amazing working guide dogs! My role has changed and evolved during the past 10 years to the position I now hold, it's still exciting, I'm constantly learning, developing my role further and still get to see over 1000 puppies destined for great things.

### What is your relationship with BattLab? How does working with BattLab assist you in your current role?

The organisation has been working with Battlab for over 10 years, we use them as our primary lab service for both our Breeding Centre and training school in Leamington Spa. We always use them for numerous samples submitted from our dogs from around the UK, the speed and accuracy of reporting is important to us especially when dealing with the health of our working dogs and breeding stock.

Battlab collect from the Breeding Centre most days and supply us with progesterone results a few hours later, this enables us to keep our conception rate very close to 100% as our mating's are timed accurately. We recently met with the team at Battlab to discuss how we can work better together and make use of their services going forwards, a very approachable forward thinking team and we look forward to building on our already great relationship.

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Yours sincerely,  
The BattLab team

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