

Newsletter 12 / 2016



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.

LONDON VET SHOW 2016

From our whole staff, a great big thank you to all the people that visited our stand at the London Vet Show last month. We hope you found the informative material on the display inspirational and we look forward to speaking to anyone interested in our services over the coming weeks and months. To keep being updated about our news, join our Facebook page.



RABBIT HAEMORRHAGIC DISEASE VIRUS



Rabbit haemorrhagic disease virus (RHDV) is a calicivirus of the genus *Lagovirus* that causes rabbit haemorrhagic disease (RHD) in adult European rabbits. First described in China in 1984, the virus rapidly spread worldwide. In Great Britain, RHDV was first detected in 1992 during which up to 80% of mortality was observed. The availability of efficacious commercial vaccines enabled its control. In Summer 2010, a RHDV variant (called RHDV2) was detected in France, several cases of RHDV2 infections have been confirmed in the last year in Great Britain both in wild and domestic rabbits, and included rabbits that had been vaccinated with the current RHD vaccine.



RHD causes high mortality, with individuals succumbing between 48-72h post-infection in peracute forms. The disease is characterised by acute necrotising hepatitis, but haemorrhage due to disseminated intravascular coagulation (DIC) particularly in the lungs, heart, and kidneys may also occur. Acute infections are accompanied by anorexia, apathy and neurologic signs such as opisthotonos, excitement, paralysis and ataxia may also be observed. There are occasionally some respiratory signs and bloody nasal discharge. Subacute forms of the disease present similar, but milder clinical symptoms and most rabbits survive.

The possible routes for transmission of the disease are oral, nasal, conjunctival and parenteral. As blood feeding insects have also been shown to be efficient mechanical vectors transmission may occur not only through direct contact with an infected animal but also without any direct contact to other rabbits at all (by means of contaminated food, bedding, water, clothing, cages and equipment, vector-borne).

BattLab offers a **PCR test**, followed by sequencing, which can **discriminate between classical (RHDV1) and type 2 genotypes**. The sample of choice for the diagnostic PCR is liver, since it is the organ containing the higher viral titre. We recommend submission of fresh or frozen tissue collected at post mortem, since formalin fixed tissues are not suitable for this test. Alternatively, other organs (e.g. spleen, peripheral blood, urine) may also contain variable levels of virus which can be detected by PCR. For more information don't hesitate to contact our laboratory.

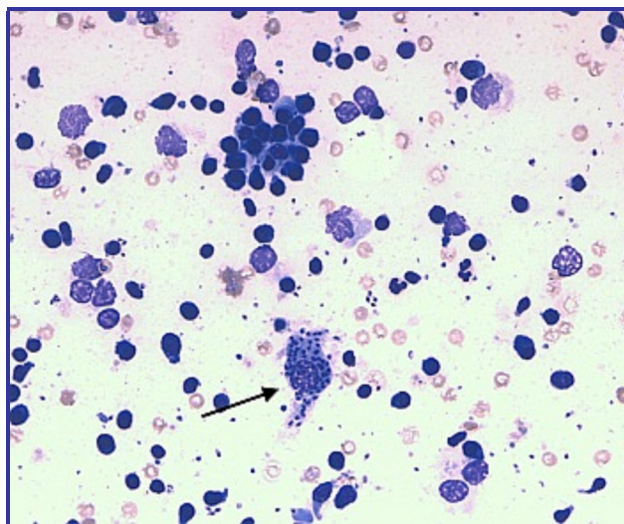
CYTOLOGY PICTURE OF THE MONTH

This high magnification picture (Wright Giemsa, 50x) is from an aspirate from an **enlarged popliteal lymph node** of an adult, male dog with localised lymphadenopathy and history of previous travel to Spain.

What is your diagnosis?

The submitted smear has moderate cellularity and good preservation. The background is clear with moderate numbers of red blood cells and a few bare nuclei. A main population of small lymphocytes is seen throughout the smear, together with rare macrophages. Occasionally, macrophages contain several elongated basophilic structures (indicated by the arrow), which are compatible with *Leishmania* amastigotes.

Leishmaniosis is an infectious disease endemic in several European countries and reported in the United Kingdom in dogs with history of travelling abroad. Diagnosis can be achieved by serology and/or PCR testing, however, infection can also be confirmed by



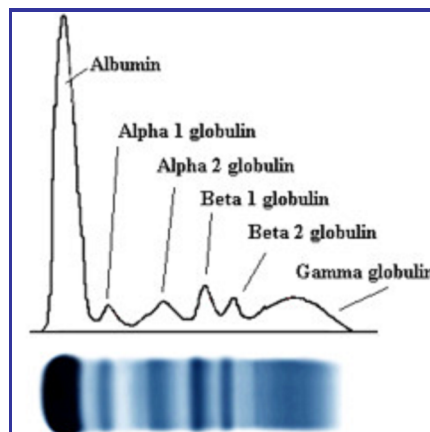
observing *Leishmania* amastigotes in cytology samples from lymph nodes, spleen, skin impressions, bone marrow, or joint fluids stained with Giemsa stain or a quick commercial stain.

Our laboratory offers a **comprehensive cytology service** for all domestic species. This is provided by **on site board certified pathologists**, with a turnaround time typically within 24 hours from the receipt of the sample. For more information don't hesitate to contact us.

PROTEIN ELECTROPHORESIS (PE)

Protein electrophoresis (PE) is a laboratory technique used to determine the levels of certain groups of proteins in serum or urine. When placed under charge, proteins will separate into various groups of one or more bands based on their ability to migrate through cellulose acetate or agarose. The degree of migration toward the positively charged terminal (anode) is based on the electrical charge of the select protein as well as its size and shape. Depending on the method used and the species of the patient, proteins may separate into 4-6 or as many as 10-15 bands. A protein band may reflect one protein or several proteins that have migrated to the same distance. These bands are grouped into electrophoretic regions, most notably α_1 , α_2 , β_1 , β_2 and γ .

Following electrophoresis, the cellulose or agarose strip is stained. Bands that contain the most protein stain darkest. The total area under these peaks represents the total protein concentration.



60 SECONDS WITH...

We hear from Elaine Taylor, laboratory technician at BattLab.

How long have you been at BattLab?

I have worked at BattLab for more than 10 years, almost from the opening of the laboratory in 2005.

What is your role at BattLab?

I am a laboratory technician with a special focus in clinical biochemistry.

What do you enjoy doing in your spare time?

My main hobby is flyball. Flyball is a dog sport in which teams of dogs race against each other from a start/finish line, over a line of hurdles, to a box that releases a tennis ball to be caught when the dog presses the spring-loaded pad, then back to their handlers while carrying the ball. I am long standing member of the Hinckley Hooligans fly ball team. We compete all over the UK and this year I will be competing at Crufts with my dog Raife as a guest member of the Nuneaton fly ball team. I also enjoy camping and hiking.



Yours sincerely,

The BattLab team

The Venture
Centre

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