

Newsletter 12/2018

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.

Wishing you & your Pets
a Merry Christmas
& Happy New Year



All the staff at BattLab wishes you a Merry Christmas and Happy New Year.

Our laboratory will be up and running for most of the holiday time. We will be closed only on Tuesday 25th and Wednesday 26th of December.



Christmas Dangers and Safety for Pets

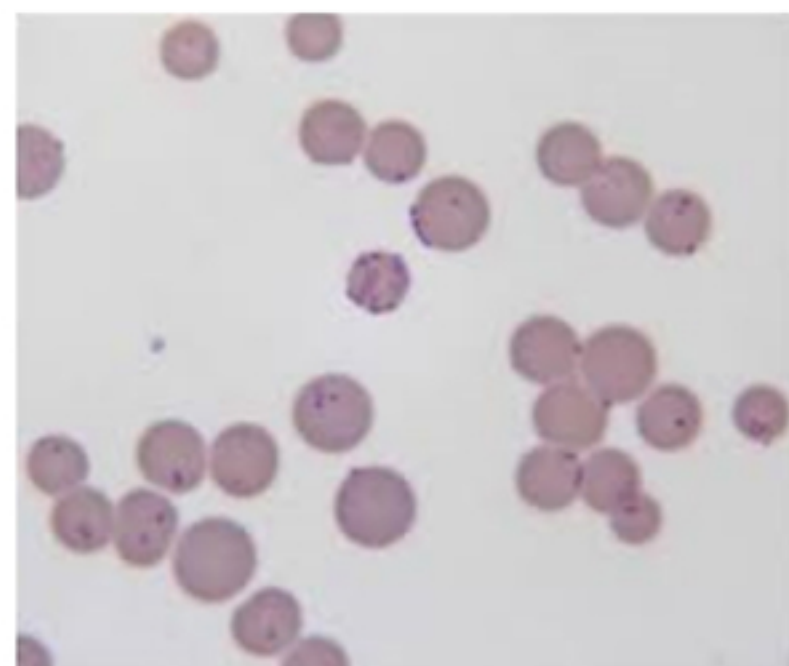
Christmas is now around the corner, and so it is that time of the year to enjoy our relatives, friends and of course pets. However, the festive season also presents hidden dangers for our pets, as we are sure you are well aware of. In this short article, we just want to provide you a list of some of the dangerous foods for our pets and refresh what these can cause, with a particular attention to the clinical signs and changes in blood results.

- **Chocolate:** theobromine is a substance contained in chocolate and toxic to dogs and cats. Even a small amount, can cause hyperexcitability, tremors and even convulsions. Maybe not everybody knows that the darker the chocolate, the more potent levels of theobromine become, with baker's chocolate being the most dangerous. Veterinary treatment should be sought for any dog ingesting more than 3.5 g/Kg of plain/dark chocolate and 14 mg/kg of milk chocolate.
- **Christmas puddings and mince pies** (grapes, raisins, sultanas): all these products are toxic to dogs and possibly to cats, even when only small quantities are ingested. They cause severe kidney failure, characterised by severe azotaemia. The pathophysiology of this is still unclear.
- **Onion and garlic:** all these products belonging to the *Allium* species can cause toxicity. They have a powerful oxidative effect, especially in cats, and may cause haemolytic anaemia. Gastrointestinal signs are also very common.
- **Artificial sweeteners:** many sweets that we eat during Christmas may contain xylitol. This can induce the release of insulin in the body, resulting in hypoglycaemia and potentially damaging other organs (e.g. liver) which do not have the glucose required to function. Signs of poisoning can be rapid sometimes; prognosis is good if this is treated quickly.
- And do not forget **other potential hazards** including poinsettia, mistletoe and holly, which can all cause gastrointestinal irritation if ingested.



PCR testing for detection of Haemotropic Mycoplasma in cats and dogs

Feline haemotropic Mycoplasma (previously known as *Hamobartonella felis*) is a common cause of severe haemolytic anaemia in cats and has been found infecting cats worldwide. Until a decade ago, diagnosis has been a challenge and was mostly relying on the examination of blood smears or response to therapy. The arrival of molecular diagnosis and the introduction of specific PCR systems has completely revolutionised the approach to this disease. Below some **frequently asked questions (FAQs)** that may help you to understand more about this disease and its diagnosis.



Can Haemotropic Mycoplasma be diagnosed by blood smear examination?

Mycoplasma haemofelis can occasionally be recognised at the time of parasitaemia by blood smear examination. It appears as small blue cocci, rings, or rods on the borders of red blood cells (see picture). However, the parasitaemia is cyclic, and the organisms may sometimes be numerous, other times scarce or not found on the smear.

Moreover, a diagnostic sensitivity of less than 20% has been reported for examination of the blood smear, and the diagnostic specificity is often hampered by confusing organisms with stain precipitates or Howell-Jolly bodies. In particular, light microscopy is unfit to diagnose *Candidatus Mycoplasma turicensis* infection because of the usually low blood loads.

Which are the advantages of PCR testing?

PCR testing aims to identify and amplify the Mycoplasma 16S rRNA gene. This procedure has a much higher sensitivity than blood smear examination as it is able to identify as low as 7 genome copies per ml of blood. Moreover, PCR has another additional advantage as it has the ability to differentiate the species of Mycoplasma. False positive and false negative results may occur but are very rare. In particular, false-negative results can occur if low levels of bacteraemia are present at the time of testing or the cat has recently been treated with antimicrobials.

Is Mycoplasma a single pathogen or are there multiple species?

There are multiple species of Mycoplasma, which are known to have different level of pathogenicity.

- *Mycoplasma haemofelis*: most pathogenic species, can cause haemolytic anaemia in immunocompetent cats.
- *Candidatus Mycoplasma turicensis*: moderately pathogenic species, can be pathogenic in immunocompromised cats.
- *Candidatus Mycoplasma haemominutum*: least pathogenic species.

As a general rule, PCR results should be interpreted in the light of patient's clinical signs and haematologic findings and infecting haemoplasma species.


What is the current situation in the United Kingdom?

Based on a study conducted in 2003 by the University of Bristol on 426 healthy and sick UK cats, 17% were positive for *Candidatus Mycoplasma haemominutum*, 1.5% were positive for *Mycoplasma haemofelis* alone and one was positive for both.

Our laboratory offers a comprehensive service of PCR testing for infectious diseases in all domestic species. For more information visit our [website](#) or contact us by phone or [email](#).

Yours sincerely,
The BattLab team

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