



Rapid detection of Evans syndrome (IMHA and IMTP) in dogs by Flow cytometry

(A Biotechnological service offered for the first time in the country)



Backdrop

- Immune-mediated haemolytic anaemia (IMHA) and Immune mediated Thrombocytopenia (IMTP) are collectively called as Evans syndrome.
- Evans syndrome is a common cause of anemia in dogs and cats.
- Evans syndrome leads to damage of RBCs/platelets in the blood vessel and/or tissues leading to intravascular or extravascular haemolysis.
- The Direct Antiglobulin Test (DAT) is the conventional test for Evans syndrome. It has several disadvantages including false negative results, requirement of high quantity of antiserum, RBCs, time and high cost.
- Flow cytometry proved to be highly sensitive in detecting the RBC and platelet - bound immunoglobulins in Evans syndrome.
- Flow cytometry provides a more rapid, sensitive, specific and early detection method for IMHA and IMTP using lower volume of cells.

Clinical signs



Evans syndrome in dogs may manifest as :

- Blanched mucous membrane;
- Ecchymosis (subcutaneous purpura) and
- Blood in urine

Test Methodology

- Blood collection from suspected dogs in EDTA vials (1ml).



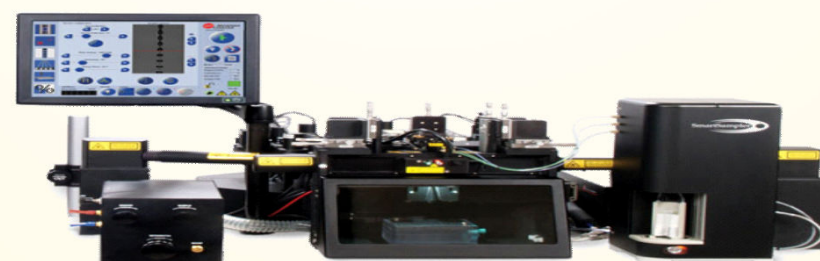
- Blood should reach lab within 24 hours at +4°C for RBC and platelets separation



- Staining of RBC and platelets with Flurochrome (IgG and IgM)



- Flow cytometry reading for suspected dogs stained RBC and platelet

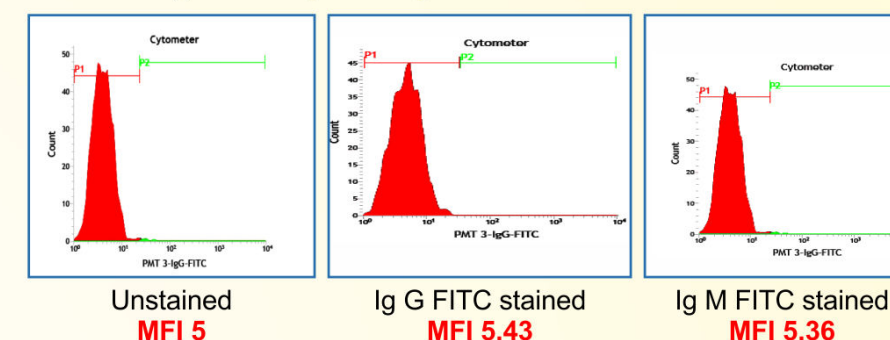


Cost of Service

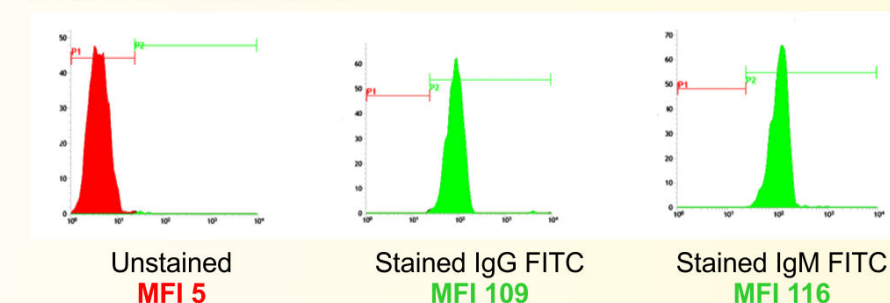
- Cost of testing - Rs. 500 per sample
- Results will be provided after 24 hours

Results

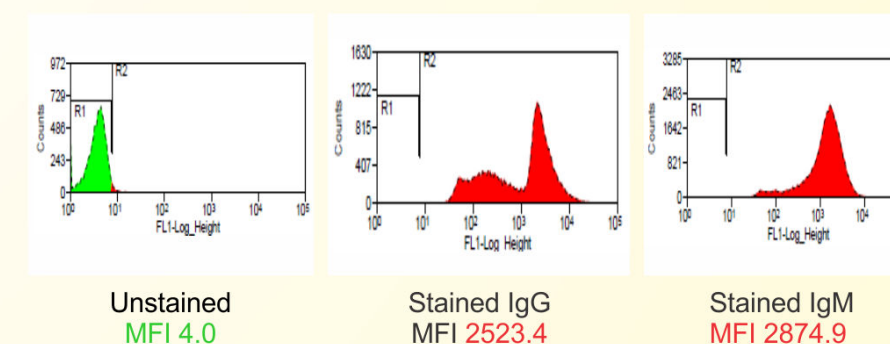
Normal Dog - Flow cytometry results MFI less than 6



IMHA positive dog - Flow cytometry results MFI should be more than 6



IMTP positive dog - Flow cytometry results MFI should be more than 6



Sensitivity and specificity

- Flowcytometry showed 93.1% sensitivity and 100 % specificity
- Conventional DAT showed 17.2% sensitivity and 100 % specificity

For further details contact : **The Project Director**, Translational Research Platform for Veterinary Biologicals
2nd Floor, Central University Laboratory Building, CAHS, Tamil Nadu Veterinary and Animal Sciences University
Madhavaram Milk Colony, Chennai - 600051, Tamil Nadu, India Email : dirtrpvb@tanuvas.org.in, Phone : 044-2555 6275/77