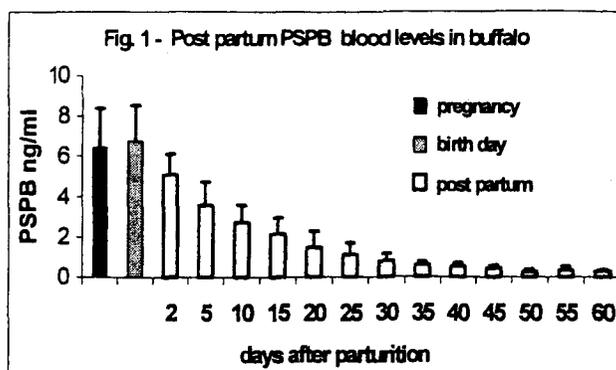


PSPB concentrations are lower and stay relatively constant till birth (1). Aim of the research was to clarify the post-partum trend of PSPB blood level in buffalo cows, in order to define the temporal limits of a reliable PSPB pregnancy test in this species. Blood samples were taken from 13 pregnant females at the end of pregnancy, at birth and then at 5 day intervals for 60 days. The plasmas obtained were assayed at the UNCEIA laboratory of Maisons Alfort (France) by means of a double antibody RIA, as described by (3). The results are reported in Fig. 1. The PSPB was present in all pregnant animals. Blood levels were not significantly different at the end of pregnancy and at birth date. The post partum persistence of the buffalo PSPB in circulating blood was confirmed to be very long, the concentrations halving 8-10 days post-partum (that is of the same order as reported for cows). However, from the 50th day after birth the residual PSPB blood levels are so low (<0.3ng/ml) that from this day, pregnancy diagnosis based on PSPB assay seems perfectly reliable.

References: (1) Debenedetti et al., 1997 *Proc. V World Buffalo Congr.*, 771; (2) Humblot et al., 1988 *J.Reprod.Fert.*, 83, 215; (3) Humblot, 1992 *Ann. Zootech.*, 41, 389.

Key words: Buffalo, Pregnancy diagnosis, PSPB.



P53 PREGNANCY-ASSOCIATED GLYCOPROTEIN DETECTION BY RIA IN PREGNANT BUFFALO COWS (*Bubalus bubalis*). COMPARISON OF THREE DIFFERENT ANTISERA. Debenedetti A., Sousa N.M.², Sulon J.³, Beckers J.F.³, Barbato O., Malfatti A.⁴. *Department of Biopathologic Veterinary Science. Faculty of Veterinary Medicine. University of Perugia (Italy).* ²*Faculty of Veterinary Medicine. Federal University of Santa Maria, RS (Brazil).* ³*Physiology of Reproduction. Faculty of Veterinary Medicine. University of Liège (Belgium).* ⁴*Department of Veterinary Science. Faculty of Veterinary Medicine. University of Camerino (Italy)*

The Pregnancy Associated Glycoproteins (PAGs), synthesized by trophoblastic cells, have been isolated from several ruminant species. They are released in maternal blood circulation where they are detectable by RIA from a few weeks after fertilization till parturition and even after. In cattle, the measurement of PAG (or PSPB) concentrations is now widely used as pregnancy test. In a preliminary investigation, a PSPB RIA system was applied in buffalo cows but the measured concentrations were much lower than in the bovine species, probably due to a lower affinity towards the antibodies. The aim of this work was to compare the efficiency of three different PAG antisera in order to improve the accuracy of assays in buffalo cows. Plasma samples (n=52) collected from 22 buffalo cows at different periods of pregnancy and postpartum have been tested by three RIA methods using antisera raised against different PAG preparations: System A = bovine PAG₆₇ (boPAG-1), System B = caprine PAG₅₅₊₅₉ and System C = caprine PAG₅₅₊₆₂. In the three systems the boPAG-1 was used as standard (0.2-25 ng/ml) and tracer. The regressions and the variance analysis were calculated by using the SAS.

All the three RIA systems demonstrated to be able to measure the buffalo PAG concentrations (> 1,0 ng/ml as discriminant) for pregnancy diagnosis. From the regressions in fig.1, the values of RIA A were significantly (P<0.01) lower than those of systems B and C, the last one giving the highest concentrations (near three times higher than A). The correlation coefficient (r²) between A and C was higher (0.964) than between A and B (0.885) and between B and C (0.915) systems. These results suggest that the buffalo pregnancy proteins are better recognised by the antisera raised against the caprine PAGs.

Key words: Buffalo, Pregnancy, PAG.

