MILK ELECTROLYTES AS PREDICTORS OF PARTURITION IN CAPTIVE BLACK (*DICEROS BICORNIS*) AND WHITE (*CERATOTHERIUM SIMUM*) RHINOCEROS

BALL RL[1], WEATHERFORD D[1], GREEN J[1], FORKER K[1], CHRISTENSEN B[2]

[1]Busch Gardens Tampa Bay, 3605 Bougainvillea Drive, Tampa, Fl, 33674, dr.ray.ball@buschgardens.com
[2] University of Florida, College of Veterinary Medicine, PO Box 100136 Gainesville, FL 32610-0136

Predicting parturition in captive wildlife can be problematic. Often exact breeding dates are not known. Multiple breeding dates can also hinder efforts to arrive at a conception date. Some species will show physical evidence of impending parturition, but the birthing window can be large. Development of the mammary glands in both black (*Diceros bicornis*) and white rhinoceros (*Ceratotherium simum*) suggests parturition within a few weeks. Development of the teats themselves suggests parturition within days. While obstetric problem are unusual in captive rhinos, it may be valuable to predict parturition with a finer degree of certainty. Management issues such as separation from the herd and allocation of staff may benefit from more accurate predictors of parturition. Medical management can also be facilitated in higher risk deliveries as well.

Rhinos in captivity are often trained to facilitate their care. This training has facilitated the collection of milk from a pregnant black and white rhinoceros at Busch Gardens Tampa Bay. Mammary development progressed as described above. Collecting milk 7 – 10 days prior to anticipated parturition was added to routine blood sampling in a captive black and white rhinoceros. Parturition took place within 12-36 hours of the ratio of Na/K to become inverted as is reported in mares (DUSEY et al., 1984). Further samples from other facilities are taking place but it appears that milk electrolytes can be useful to monitor for predicting parturition in African rhinoceros species.

References:

DUSEY JC, DUDAN FE, ROSSDALE PD (1984): Mammary secretions in normal spontaneous and induced premature parturition in the mare. Equine Vet. J. ***16****, 256.*