

### 3. One Health - the WSPA Approach (GRF Davos Planet@Risk 2014 Vol2 (4): 212-216)

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#### Abstract

One Health principle holds that human health is closely linked to animal health and welfare. Consequently, the development of integrated responses to global public health challenges is required. WSPA believes that global adherence to animal welfare principles will be instrumental in preventing emerging infectious diseases, including zoonotic diseases, from occurring, and thus help stop these diseases inflicting serious resource strains on national and international health services. We work with governments, intergovernmental and non governmental organisations and communities to ensure positive solutions are put in place for animals and people alike. Solutions include; working to control the transmission of canine rabies to people through sustainable mass dog vaccination programmes; preparing communities for disasters so that both their own and their animals' welfare is protected; and addressing the role that better welfare standards for wildlife play in the spread of zoonotic diseases.

### 4. Follicle size of origin affects glucose 6 phosphate dehydrogenase activity and developmental competence of oocytes from Boran cows- *Reproduction of Domestic Animals Journal*

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#### Abstract

In vitro embryo production (IVEP) has been used to improve of cattle genotypes in many parts of the world. However IVEP is not without some challenges. Oocyte developmental competence is a key area affecting IVEP and it is associated with the glucose 6 phosphate dehydrogenase (G6PDH) activity and follicle size. Ovarian follicular dynamics differ between *B. indicus* and *B. taurus*, which may influence oocyte competence. This study sought to evaluate the effect of follicle size on G6PDH activity and oocyte developmental competence in the Boran (African Zebu breed) cattle using brilliant cresyl blue (BCB) staining. Oocytes were collected from Boran cows at slaughter, their follicles were measured. Follicle size affects Boran cows' developmental competence and classified into 3 groups; 1-3mm, >3-6mm and >6mm in diameter. Cumulus oocytes complexes (COC) were exposed to BCB stain for 1 hour and observed for cytoplasmic coloration. Those that retained the blue coloration (BCB positive) were deemed competent (low activity of G6PDH) while those that did not have any cytoplasmic coloration (BCB negative) were deemed incompetent (high activity of G6PDH). Higher proportion ( $P < 0.01$ ) of BCB positive oocytes was found in >6mm follicles (81.1%) than in 1-3mm (73.1%) and >3-6 mm (76.5%) follicles. BCB positive oocytes from 1-3 mm follicles had higher ( $P < 0.05$ ) blastocyst rate (18.94%) than BCB negative oocytes (9.7%), however no significant difference was found in their cleavage rates ( $P > 0.05$ ). No difference in cleavage and blastocyst rates was found between BCB positive and negative oocytes from follicles with >3-6 mm in diameter. The cleavage and blastocysts rates with BCB positive oocytes increased as follicle diameter increased. In conclusion, in Boran cows as follicle size increases the activity of G6PDH decreases in the whereas COC developmental competence