**INTRODUCTION**

**NO CONCEPTION**

**REPEAT BREEDER**

(COW THAT HAS NOT CONCEIVED AFTER THREE OR MORE SERVICES)

- IGF-1
- REPRODUCTION
- IMMUNITY
- INFLAMMATION

**OBJECTIVE**

The present study was conducted in order to investigate whether the TLR-4 and Fas gene expression in neutrophils and plasma level of IGF-1, Lactoferrin (LF) and Haptoglobin (Hp) varied between repeat breeding (RB) and regular breeding (RgB) cross bred cattle.

**MATERIALS AND METHODS**

Selection of animals
- Recently calved Karan Fries cattle
- Reared under farm and field conditions at Karnal, Haryana, India
- Post partum cows monitored up to three consecutive services
- Conceived
- Not Conceived
- Regular breeders (RgB) (n=6)
- Repeat breeders (RB) (n=14)

Study Period = 4th-21st week postpartum
- Collection of blood at weekly intervals (stopped when animal got pregnant)

Concentration of cell suspension (neutrophils) used:
- 5 x 10^6 live cells/ml in culture media

Viability determination by Trypan blue exclusion method
- 200 μl of Cell suspension per well in triplicate in 96 well plates

**RESULTS**

**FIG. 1:** Concentration of Plasma IGF-1 in RgB and RB groups

**FIG. 2:** Concentration of Plasma Lactoferrin in RgB and RB groups

**FIG. 3:** Concentration of Plasma Haptoglobin in RgB and RB groups

**FIG. 4:** Relative expression of TLR-4 and Fas mRNA in neutrophils of RgB, RB and RB+IGF-1 (in vitro IGF-1 supplemented) groups

**CONCLUSION**

From the present study, it was concluded that the immune status of RgB group animals was better when compared with RB group animals and poor immune status may be one of the causative factor for repeat breeding problem.