

# Effect of testicular heat stress in sperm kinetics and resistance during storage at 4 °C in rams (*Ovis aries*)

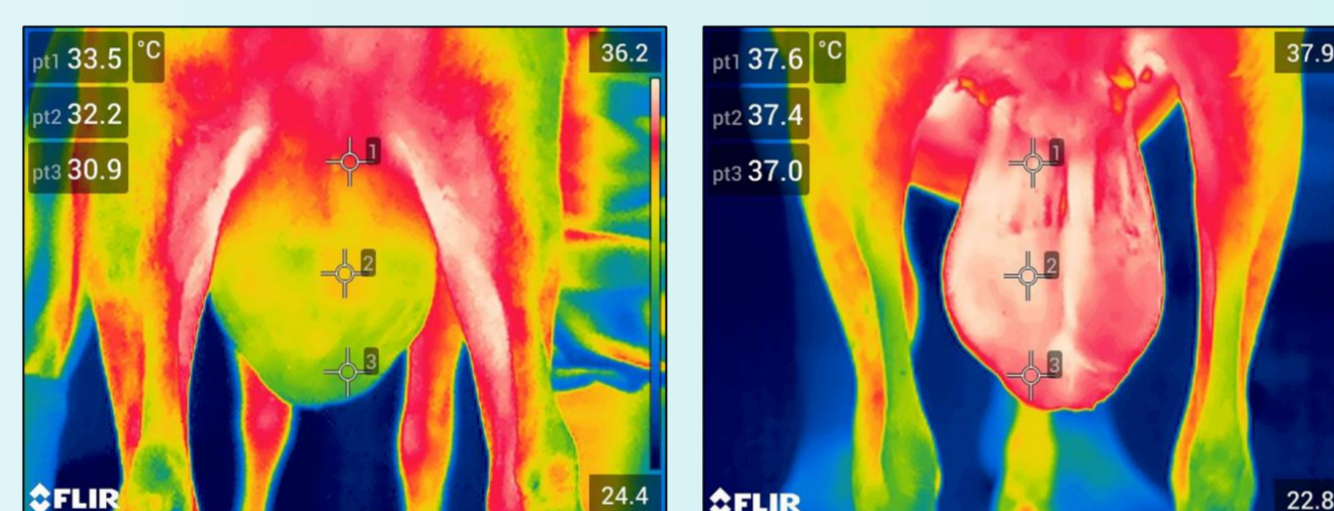
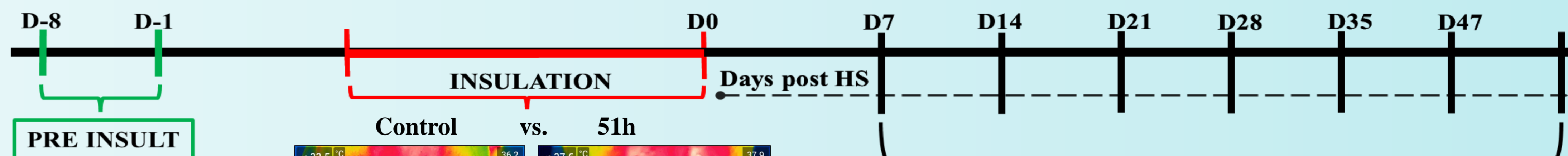
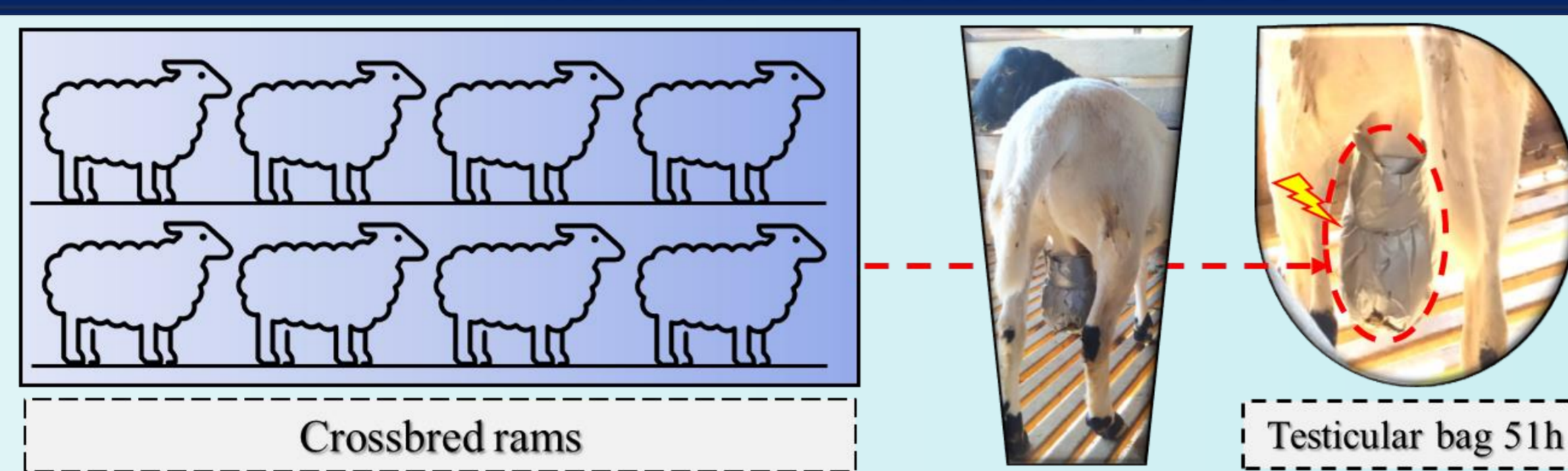
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## INTRODUCTION AND OBJECTIVE

As ruminant testis must be 3-5 °C below body temperature for proper spermatogenesis and testicular function (KASTELIC J.P. et al., 1996), heat stress is a critical factor impairing male reproduction. Thus, our aim was to investigate the effects of testicular heat stress on sperm kinetics and survival post-cooling storage at 4°C.

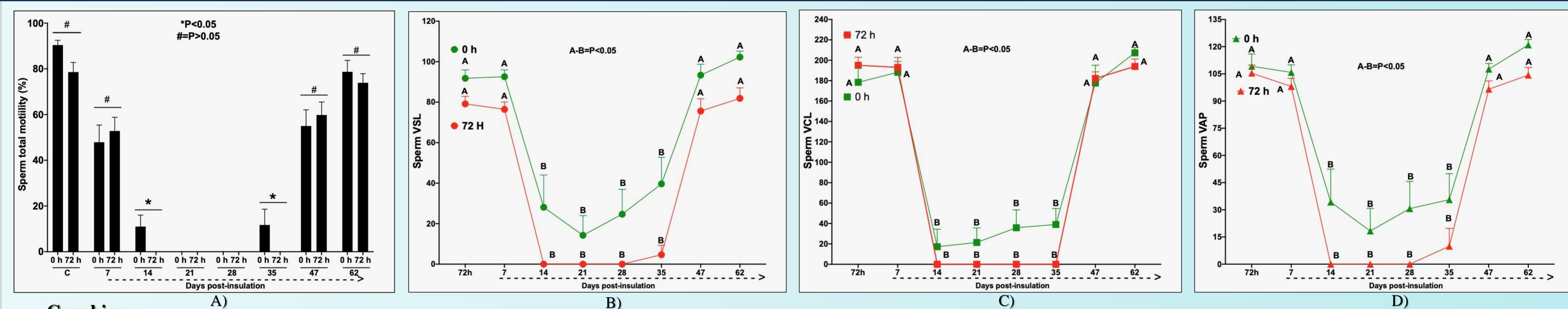
## MATERIALS AND METHODS



Collection, dilution and refrigeration of semen at 4°C

All animals were approved in a reproductive soundness evaluation

## RESULTS



### Graphics:

- All the other kinetic values were impaired, following the same trend as indicated by total motility (%)
- Straight Line Displacement Assessment (VSL) via Computerized Sperm Cell Analysis (CASA); moment 0 (M0) and after 72 hours of refrigeration.
- Curved Line Displacement Assessment (VCL) via CASA; M0 and after 72 hours of refrigeration.
- Evaluation of Displacement in Medium Path (VAP) via CASA; M0 and after 72 hours of refrigeration.

## CONCLUSION

Therefore, we inferred that D7 and D47 sperm were resistant to cooling, probably due to preservation of mitochondrial function and energy metabolism.

## REFERENCE

Kastelic JP, Cook RB, Coulter GH. Contribution of the scrotum and testes to scrotal and testicular thermoregulation in bulls and rams. *Reproduction* 1996;108:81-5 (B).

### Acknowledgments:

