

Comparing BALB/c Nu breeding between isolator and IVC cage

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Abstract: Continuous efforts have been done to refine the care and use of animals in research. This has resulted to using better animal models, health status and animal housing. Therefore, special care and measurements are required to maintain the well-being of immune-compromised animals as they are more prone to infectious agents and affected by environment conditions. The aim of this study is to find out if BALB/c Nude breeds better in a standard isolator environment or Individually Ventilated Cage environment (IVC). The study will include reproductive parameters (litter born, litter weaned and total mice weaned out) collected from 30 cages, comprising of 30 male and 60 females in 1:2 breeding system over a period of 16 weeks. . The mice are provided with the same nesting material consisting of C-fold towel and Enviro-Dri and diet in both housing conditions.

Introduction and Objective

BALB/C nude mice are immune-compromised mice and are more prone to infectious agent and affected environment condition for their breeding performance. The aim of this project is to find out if BALB/c Nude breeds better in standard Individually ventilated cage environment or isolator environment

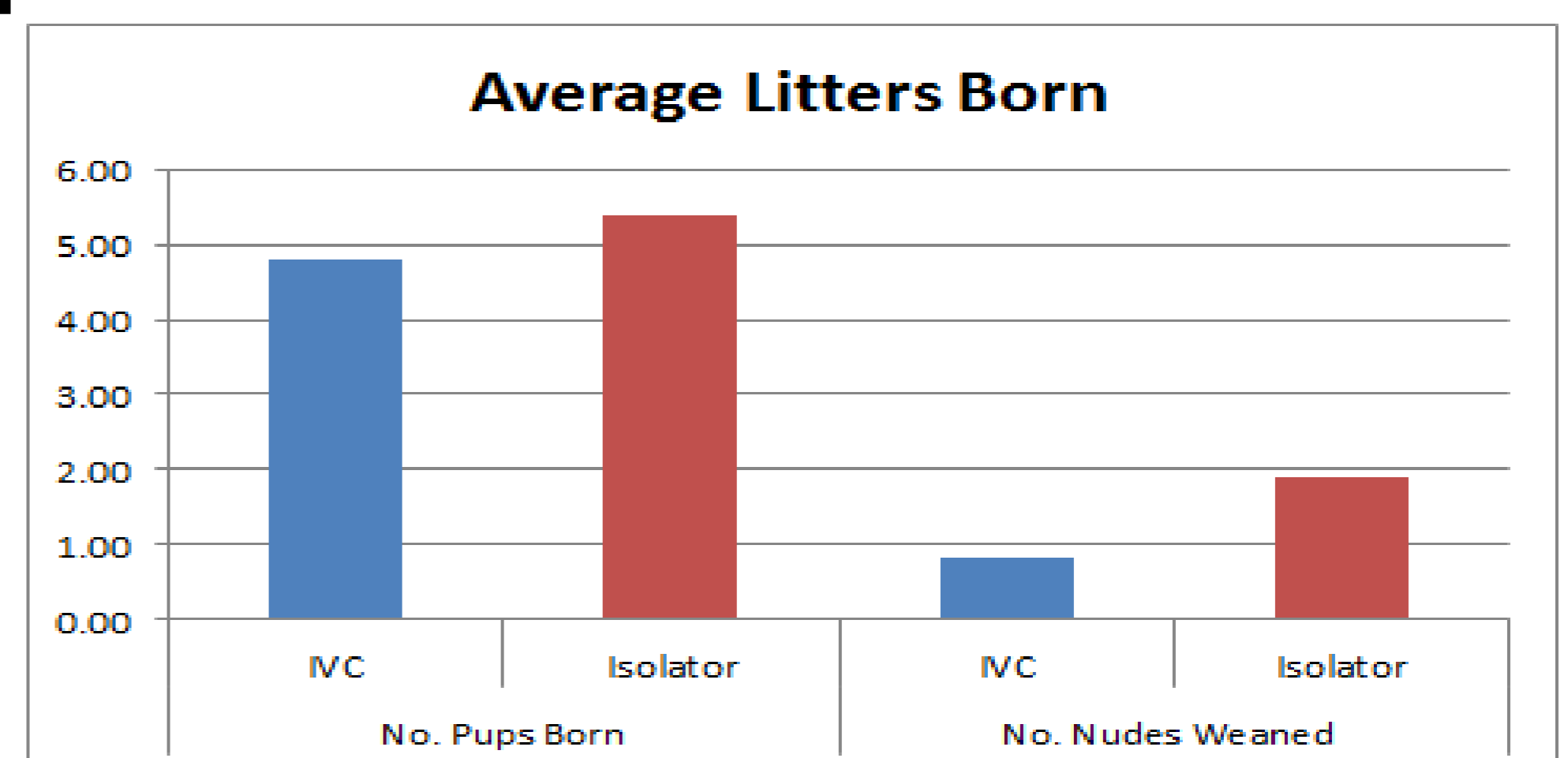
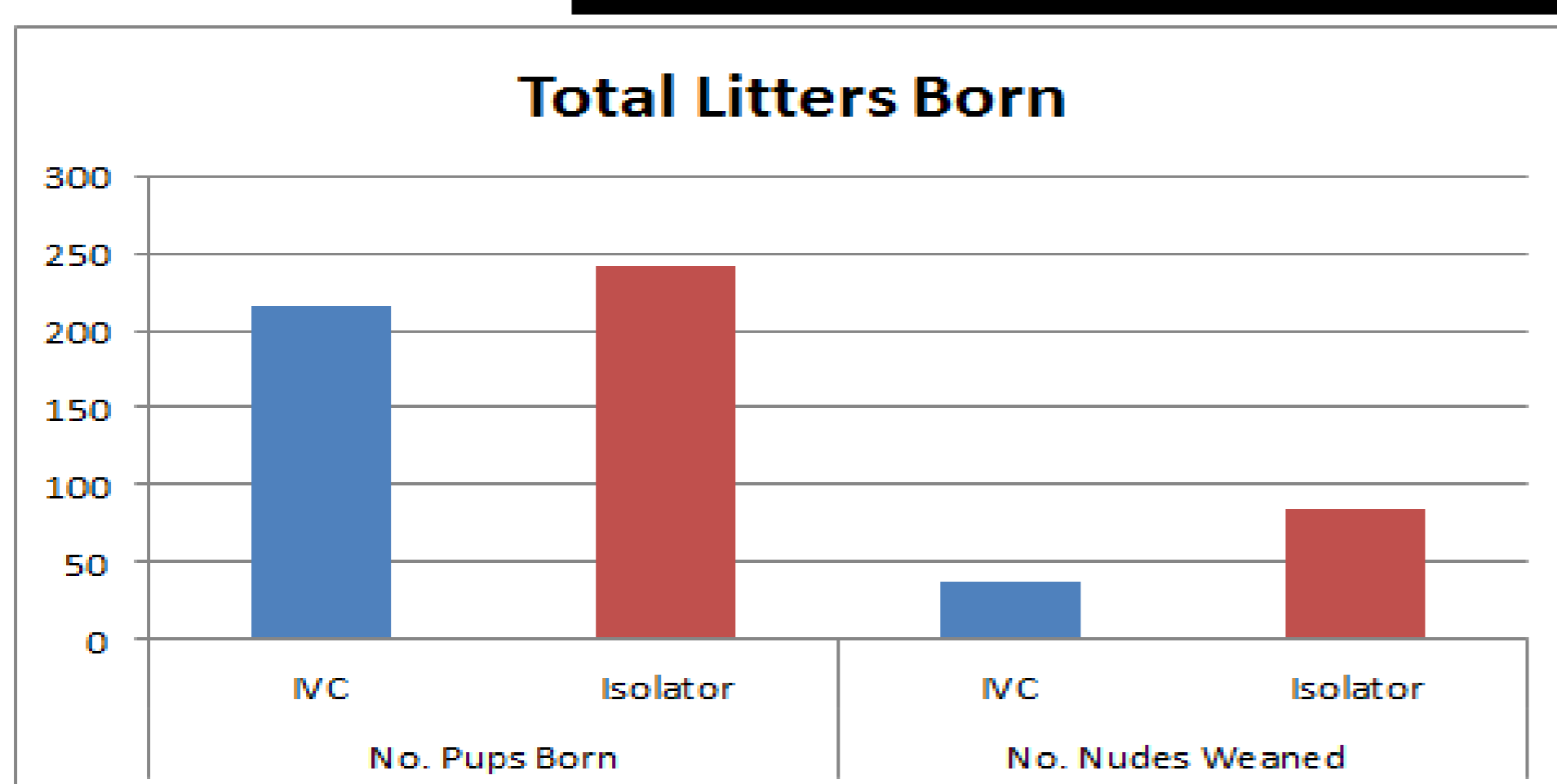
Material & Methodology:



Isolator (6x4)	IVC
Cage1145 Water Bottles	Cage1285L Auto watering system
→ Enviro Dry (Nesting Material) → Trio Breeding (30 cages/group) → 16 Weeks → Parameters measured Total Litters Born Total Litters & Nudes Weaned	



Results & Discussion:



	No. Pups Born		No. Nudes Weaned	
	Isolator	IVC	Isolator	IVC
Total Litters Born	242	216	85	37
Average Litters Born/ female mice	5.38 ± 1.84	4.80 ± 1.33	1.89 ± 1.64	0.82 ± 0.90

- Isolator showed produce better results compared to IVC cages environment.
- Higher litters born/weaned
- Higher average litters born and nudes wean

Conclusion & References

Our studies for 16 weeks showed that BALB/c nude breeding in isolator environment provides better results as compared to in IVC environment, as more pups were born and weaned out as showed in the graph. However further studies could be conducted to support our study.

References

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 Immunodeficient Mouse Models: An overview, Jose E. Belizario