IN DONKEY, ARE UTERINE AND BLOOD EOSINOPHILS ASSOCIATED?

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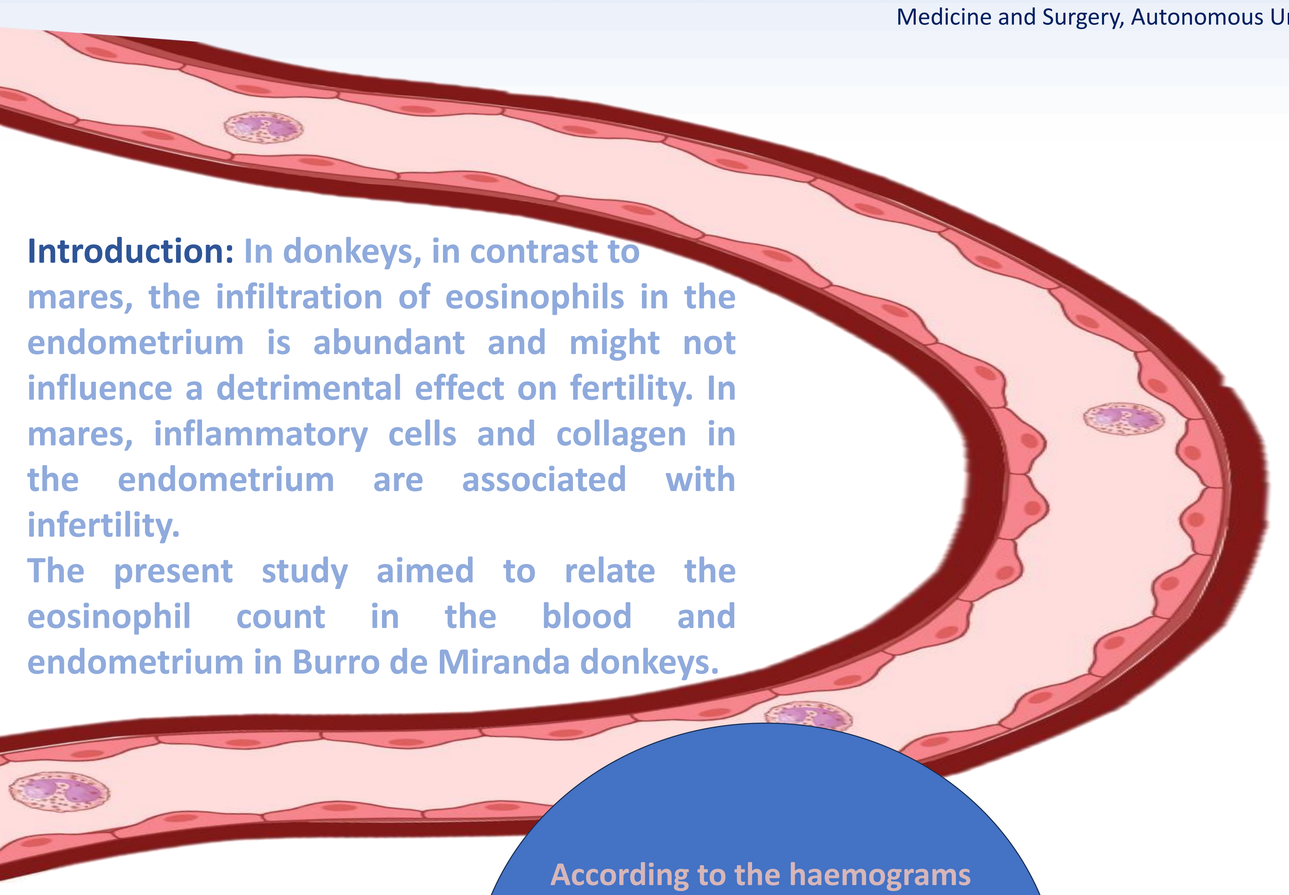
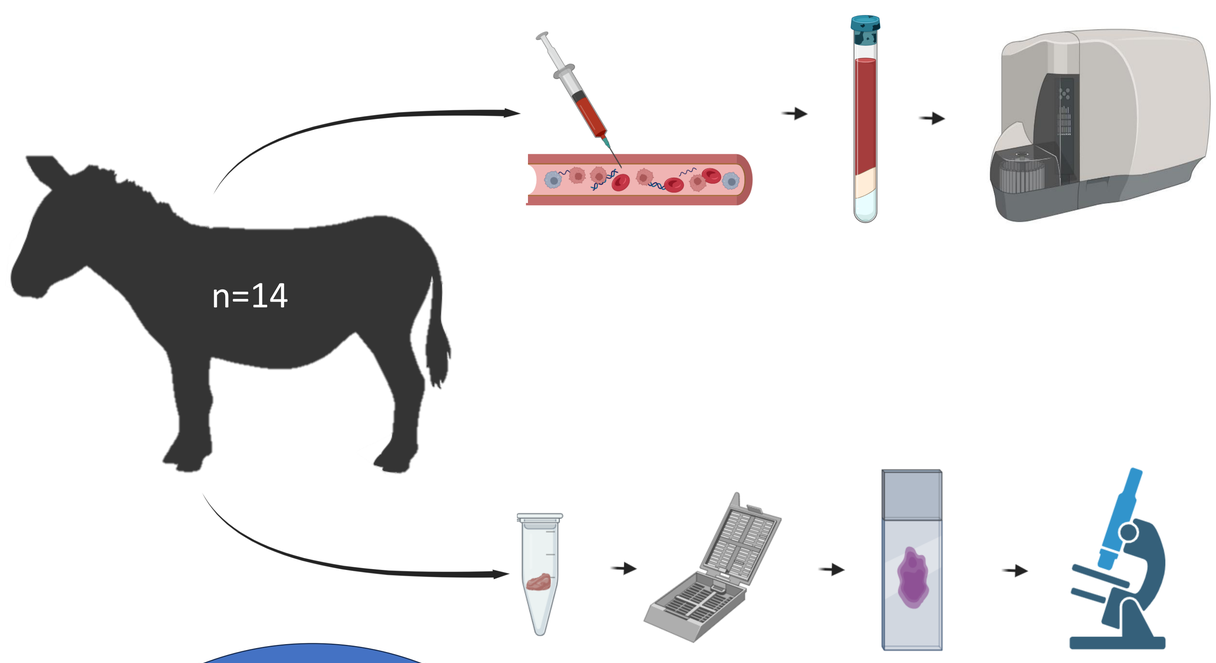


Introduction: In donkeys, in contrast to mares, the infiltration of eosinophils in the endometrium is abundant and might not influence a detrimental effect on fertility. In mares, inflammatory cells and collagen in the endometrium are associated with infertility.

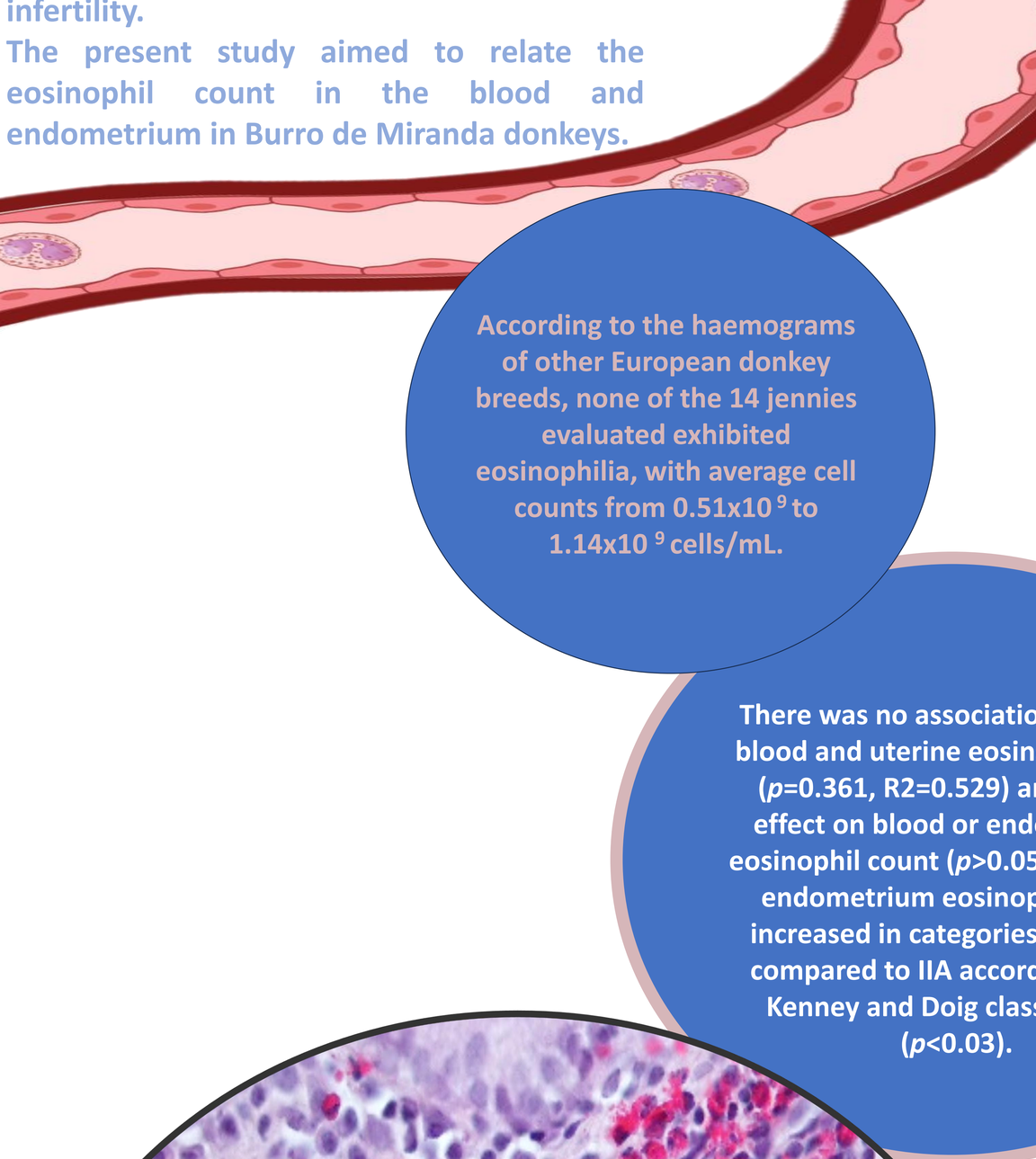
The present study aimed to relate the eosinophil count in the blood and endometrium in Burro de Miranda donkeys.



According to the haemograms of other European donkey breeds, none of the 14 jennies evaluated exhibited eosinophilia, with average cell counts from $0.51x10^{9}$ to $1.14x10^{9}$ cells/mL.

In contrast, eosinophils were identified in the endometrium of 8/14 animals, with an average of 94.3 to 117.6 cells/10 fields, present in stratum compatum and in *stratum* spongiosum of the endemoetrium, varying between 1 and 539 eosinophils.

There was no association between blood and uterine eosinophil count (p=0.361, R2=0.529) and no age effect on blood or endometrium eosinophil count (p>0.05). However, endometrium eosinophil count increased in categories IIB and III compared to IIA according to the Kenney and Doig classification (p<0.03).



Presence of eosinophil infiltrate within the stratum spongiosum of jenny endometrium. Obj. x400. Haematoxylin Eosin.

Conclusions: In the Miranda donkey, eosinophils appear to have a tropism for the uterus. Since they are present even in young and dewormed donkeys, they might be physiological in this species. The underlying mechanisms and the potential relevance of eosinophils for reproduction in donkeys warrants further studies.

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