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# Low sialic EPO ameliorate glucose homeostasis and protects embryonic development in diabetic pregnant rats.

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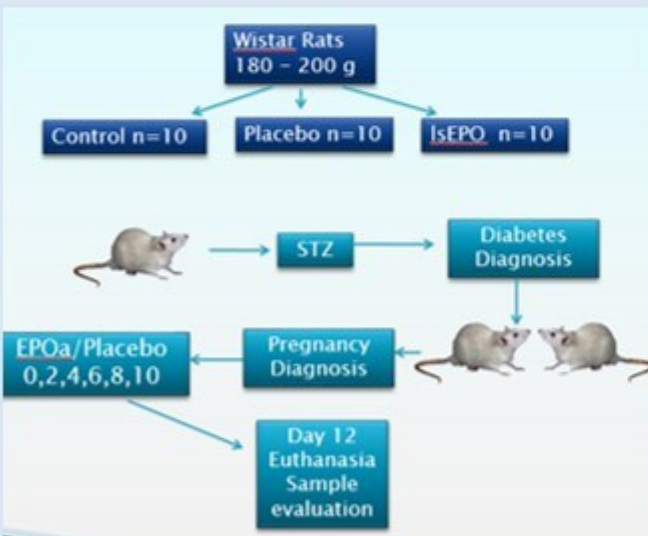
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## Introduction

Erythropoietin (EPO) is a cytokine that has been known to regulate survival and development of erythroid progenitor cells (1–3). Recently, EPO has been found to regulate survival and cyto-protection of different cell types (4,5) and ameliorate glucose homeostasis (6). The aim of this study was to evaluate the effect of low sialic EPO (lsEPO) in embryonic development and glucose homeostasis in diabetic pregnant rats.

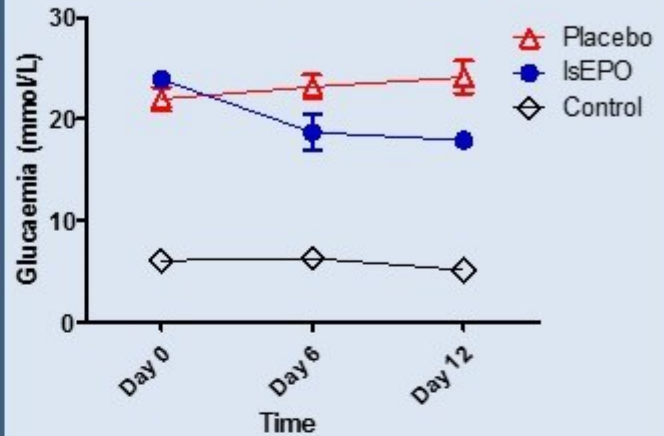
## Materials and Methods

Female rats were injected with Streptozotocin (60 mg/Kg B.W.) to induce diabetes. Two weeks after diabetes diagnosis, rats were paired with healthy males. Once the pregnancy was diagnosed, rats were injected with lsEPO or placebo on days 0, 2, 4, 6, 8 and 10 of pregnancy. Healthy pregnant female rats were used as negative control. Pregnancy was interrupted at day 12 to evaluate the product.



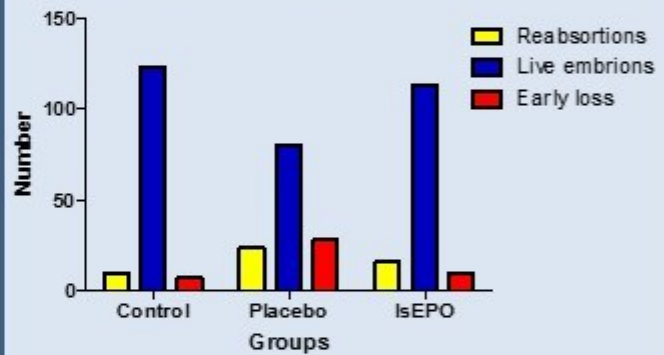
## Results

### Glucemia during pregnancy



The Glycaemia was lower in diabetic rats treated with lsEPO than in those treated with placebo. The decrease was detected as early as day 6 of treatment and was higher at day 12.

### Effect of EPO in embryo development



Diabetic rats treated with placebo show a significant increase of reabsorption and early pregnancy loss. On the other hand, diabetic rats treated with lsEPO show a decrease of reabsorption and early pregnancy loss.

## Conclusions

In conclusion, these results show that lsEPO ameliorate glucose homeostasis in diabetic pregnant rats and it is the first report of the protective effect of lsEPO on embryonic development in diabetic pregnant rats.

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