

ARE SUPEROVULATION PROTOCOLS REALLY EFFICIENT FOR EMBRYO PRODUCTION IN *INBRED* MICE LINEAGES?

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Mice are excellent experimental models for embryology, due to their prolificity, low management costs and quick responses. The mouse (*Mus musculus*) has from 6 to 12 offspring per pregnancy under natural conditions, depending upon management and lineage. The recover of embryos for research purposes is performed after superovulation induction by intra-peritoneal injections of eCG and hCG and flushing of the uterus and/or tube 48 to 96h after mating. The eCG presents the advantage of a longer half-life, allowing a single-injection superovulation protocol, but it was replaced by FSH in other species due to results inconsistency. The aim of this study was to evaluate the efficiency of a conventional mice superovulation protocol. *Inbred* C57Bl/6 (N=69) and Swiss (N=57) mice were superovulated by I.P. injection of 5U.I. of eCG (Novormon, Syntex S.A.) and, 48h latter, 5U.I. of hCG (Vetecor, Calier), being mated with males from the same lineage, or were allowed to reproduce naturally (N=80 and 92, respectively). The recover of embryos was performed 48 to 60 hours after vaginal plug identification, using DPBS added with 0.4% of BSA. The structures obtained were classified according to developmental stage and quality, using conventional criteria. Results are presented as means±SEM. There was no difference (P>0.05) in the total number of ova recovered (13.65±1.36 vs. 16.63±1.52), or in the number of viable embryos (7.82±1.04 vs. 9.09±1.16) and unfertilized eggs (3.25±0.48 vs. 3.23±0.45) between lineages (C57Bl/6 and Swiss, respectively). The number of degenerated embryos, however, was lower in the C57Bl/6 lineage (2.58±0.33 vs. 4.31±0.54; P<0.01). The percentage of viable embryos was similar between lineages (57.29% and 54.66; P>0.05). The superovulatory response can be characterized as low in *inbred* mice, considering the number of offspring born from natural reproduction (6.28±0.23 and 9.96±0.35 for C57Bl/6 and Swiss, respectively). The superovulatory treatment inconsistency, characterized by the high VC occurred despite the use of *inbred* lineages with high level of homozygosity and, consequently, low genetic variance. These results show that superovulation protocols for embryo production in mice should be improved.