

**CERCETRI PRIVIND RECOLTAREA EMBRIONILOR DE  
ORICIOAIC I UTILIZAREA LOR ÎN SCOPUL  
OBINERII CELULELOR STEM**

**RESEARCHES REGARDING THE COLLECTION OF MOUSE  
EMBRYOS AND THEIR USE TO OBTAIN THE STEM CELLS**

I.GROZA<sup>1</sup>, SIMONA CIUPE<sup>1</sup>, D.CIUPERCESCU<sup>1</sup>, EMOKE PALL<sup>1</sup>,  
BRÎNDU A STEGERAN<sup>1</sup>, DARIA GROZA<sup>2</sup>

<sup>1</sup>Universitatea de Stiin e Agricole i Medicin Veterinar Cluj-Napoca

<sup>2</sup>Universitatea de Medicin i Farmacie "Iuliu Ha ieganu" Cluj-Napoca  
igroza@personal.ro

**Cuvinte cheie:** embrioni , recoltare, cultivare, evaluare morfologic , celule stem

**Key words:** mouse embryos, collection, cultivation, morphologic evaluation, stem cells

**SUMMARY**

The research has been carried out during 2005-2006 on C57BL/6 and Swiss Albino female mice, in order to obtain embryos that have been morphologically evaluated and submitted to successive cultivations to finally serve for identification and isolation of stem cells. Fifty-two female mice have been used, divided into two separate batches according to the way the embryos have been obtained: naturally or following superovulatory treatments. The number of embryos obtained from naturally synchronized mice has been of 4 – 7/female, while from superovulated mice it has been of 9-11/female. The morphologic study of embryos using the stereomicroscope allows the evaluation of the development stage as well as the degree of suitability for cultivation. The long-term cultivation of 4-8 cells embryos in M16 medium determined their evolution to the mature blastocist stage in 69% of the cases. The short-term cultivation of morula and early blastocist in M16 medium led to their evolution to the mature blastocist stage in 88.2 % of the cases. The transformation percentage of morula and early blastocists to mature blastocists varies between 88.2%-83.8% in DMEM medium supplemented with 10% FCS as well as in M16 medium. The success of in vitro cultivation of embryos and the percentage of mature blastocists obtained in order to isolate stem cells is mainly conditioned by the development stage of the embryo as well as by the medium used.

**STUDIUL COMPARATIV AL TESTĂRII IN VITRO A UNEI NOI  
GENERĂȚII DE DILUANȚI UTILIZATE PENTRU  
CRIOCONSERVAREA SPERMEI**

**COMPARATIVE STUDY ON IN VITRO TEST OF A NEW  
EXTENDERS GENERATION USED IN SEMEN  
CRYOPRESERVATION**

VIOLETA IGNA<sup>1</sup>, ANGELA VAIDA<sup>2</sup>, S. POPESCU<sup>1</sup>

<sup>1</sup> Facultatea de Medicină Veterinară Timișoara

<sup>2</sup> Semtest S.A. Timișoara

ignavioleta@gmail.com

**Cuvinte cheie:** crioconservare spermă, diluanți spermă, taur.

**Key words:** semen cryopreservation, semen extenders, bull.

**SUMMARY**

The new generation of semen extenders, free of animal origin ingredients, excludes the risk of microbial contamination. The aim of this study was to compare the effect of soybean-based (AndroMed) and an egg yolk-based (Triladyl) extenders for bull sperm cryopreservation. Sperm post-thaw motility was higher when sperm was frozen with AndroMed than with Triladyl. Morphological and membrane integrity evaluation indicated no significant difference between the two extenders.

**RATA GESTA IEI LA IEPELE INSEMINATE ARTIFICIAL CU  
SPERM CONGELAT**

**PREGNANCY RATE IN MARES ARTIFICIALLY INSEMINATED  
WITH FROZEN SEMEN**

MORAR, I., I. GROZA, R. C. TAN

University of Agricultural Sciences and Veterinary Medicine, Faculty of  
Veterinary Medicine, 3-5, M n tur Street, Cluj- Napoca, Romania,  
iancu.morar@personal.ro

Cuvinte cheie: Inseminare artificial iap , rata gesta iei iap , sperm congelat  
Key words: Mare artificial insemination, mare pregnancy rate, frozen semen

**SUMMARY:**

During the breeding season of the year 2006, a total of 13 mares, of various ages and breeds, were artificially inseminated, by using two different insemination techniques: at the level of the uterine body, using 4- 5 ml of semen (250- 300 millions of sperm cells) for ten mares (plot 1) and insemination at the level of the uterotubal junction on the same side with the ovary possessing the preovulating follicle, with microdoses of 0.5 ml (10-15 millions sperm cells) of thawed semen for three mares (plot 2). The ovulation moment was established by ecography, which included the identification of the ovary with the preovulating follicle, as well as the follicle's dimension, shape and consistency. The preovulating follicles diameters varied from 42 to 60 mm, while their consistency was mild in 46% of the cases and fluctuent for the rest of 54% of the examined follicles. There was used an avarage number of straws (0.5 ml each) of 33/ mare, for plot 1 and 2.3/ mare, for plot 2. The pregnancy rate was 50% in plot 1 and 67% in plot 2. The significant smaller number of straws, along with the higher pregnancy rate for insemination at the uterotubal junction level allow us to recommend this technique, especially for limited numbers of available straws.