

# **METHOD OF OBTAINING OF BONE MARROW OF CATTLE**

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Stem cells are undifferentiated cells capable to self-retrieval as well as to differentiate into mature specialized cells and therefore represent extremely great interest for their use in medicine, and in the recent years - in veterinary medicine.

According to the data, the selection of stem cells from the tissues and organs of farm animals have not entered to the everyday practice of specialists of veterinary medicine. At the same time there are reports of isolation of stem cells in pigs, horses, sheep, rabbits, dogs, rats and cattle. However in all these works derived cells have different morphological characteristics depending on the conditions of allocation, which requires further in-depth study of these characteristics and improve methods of obtaining stem cells of farm animals.

Because the bone marrow is often used as a source of stem cells, the choice of location for quick access depends not only from the content in aspirate the desired fraction of cells but also requires a simple procedure of surgery, simplicity and accessibility of this method, shortening post-operative care and avoiding the all sorts of complications.

There are different methods and techniques of bone marrow taking: biopsy in the area of the sternum, proximal humeral epiphysis, distal epiphysis and proximal femur, dorsal area of the pelvic bone, buttocks of pelvic bone, area of internal iliac hill. Method of bone marrow obtaining in cattle is well designed by femur trepanation after slaughter.

However, in the literature there is no information about the method of obtaining bone marrow in animals that characterized by low tissue trauma.

Were established that method of bone marrow obtaining in the cattle in the area of the hill of ilium is affordable and easy to use, provides a sufficient amount of bone marrow aspirate.

With absence of necessity of cutting of soft tissue with subsequent suturing this method of bone marrow aspirate obtaining is nontraumatic, reduces the duration of surgery and consequently, reduces the duration of postoperative care and postoperative complications.