

Conservation of valuable genetic resources and restitution of endangered livestock breeds and species – potential targets of somatic cell cloning of mammals in livestock breeding practice

Summary

Development of innovative strategies of assisted reproductive technology (ART), such as cloning of mammalian species by somatic cell nuclear transfer (SCNT), can lead to genetic rescue of endangered or extinct breeds and species of livestock animals, including cattle and pigs. This paper presents the main scientific foundations and goals of the research subtask entitled 'Conservation and characterization of biological material in the form of cell lines for the purpose of cloning of endangered livestock breeds', implemented as part of research project number BIOSTRATEG2/297267/14/NCBR/2016, which is financially supported by the National Centre for Research and Development.

KEY WORDS: cattle, pigs, livestock breed, somatic cell cloning, SCNT, genetic resource, fibroblast cell line, cryoconservation, nuclear donor cell, nuclear-transferred embryo