ESHRE position statement by Chairman Prof. Dr. J.P.M. Geraedts 01 August 2007

Prolongation of Voluntary Moratorium on Reproductive Cloning of Human Beings

The European Society of Human Reproduction and Embryology declares another voluntary five-year moratorium on cloning human beings, where "reproductive cloning of human beings" is defined as the duplication of an existing or previously existing human being by transferring the nucleus of a differentiated, somatic cell into an enucleated human oocyte, and transferring the resulting embryo to the uterus to obtain a gestation and subsequent birth.

Ten years ago, the demonstration by Wilmut and co-workers that the nucleus of an adult sheep cell could be completely reprogrammed by the oocyte cytoplasm to generate a new adult sheep was exciting to developmental biologists because it demonstrated that the genetic information in mammals can remain intact in a differentiated adult somatic cell. In other words, nuclei of somatic cells can be totipotent and capable of generating an entire adult organism.

The first moratorium was declared since it was clear that on the one hand the totipotency of somatic nuclei could also be applied to clone human beings, but on the other that there were major practical and ethical objections to carrying out such an act. In fact this position has not been changed during the last 10 years. It can now firmly be stated, based on a large body of experimental evidence, that the efficiency of embryonic development after nuclear transfer is low in many mammals and especially in primates, including humans. Secondly, the chance of abnormal embryological development resulting in implantation failure, pregnancy wastage or abnormal offspring has proven to be extremely high, which inevitably has lead to the conclusion that experimentation of this sort on humans is still totally unsafe. Moreover, the deliberate generation of cloned human beings could infringe upon the dignity and integrity of human individuals.

At the same time it is clear that the demonstration of totipotency of somatic cell nuclei provides a major impetus for attempts to reprogram adult human cells so that they can be used in cell-based therapies for human diseases. Thus, a full understanding of how cytoplasmic factors can reprogram adult nuclei holds great hope for developing novel strategies for repair and regeneration of human tissues, for example in treating diabetes, cancer and neurodegenerative diseases. For further research on therapeutic cloning experimental work on human material will be necessary to secure the benefits of insights from animal cloning and nuclear transfer research as applied to human health. By contrast, reproductive cloning of a human being is regarded as an unethical and reprehensible act.

Therefore, the membership of the European Society of Human Reproduction and Embryology declares to prolong the already existing voluntary moratorium on the reproductive cloning of human beings. Members of the Society have no intention to attempt to clone human beings, where this act is defined as the duplication of an existing or previously existing human being by transferring the nucleus of a differentiated, somatic cell into an enucleated human oocyte, and implanting the resulting product for intrauterine gestation and subsequent birth. This moratorium shall be in effect for another period of five years (2007 –2012), with subsequent reconsideration for possible extension.