

Statement Concerning the Cloning Experiment by the Group of Korean Researchers

Therapeutic cloning has so far only been successful in animal systems. Therapeutic cloning of human cells is new; in fact, these experiments are illegal in Germany and many other countries.

The President of the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) maintains his position that therapeutic cloning is a mistake. During cloning the highly specialized genetic information must be transformed via nuclear transfer (in the cellular environment of the enucleated cell) into the totipotent state from which all somatic cells can once again develop. However, this reprogramming can only be had at the price of small yields and many malformations as was shown by the cloning of "Dolly". The cause of these difficulties are permanent chemical and structural changes in the genetic material which can only be reversed with difficulty. Developmental processes always occur in one direction only: from the unicellular embryo to the multicellular organism, never in the opposite direction.

Science does not have the slightest idea how this reprogramming process can be controlled. To investigate this matter, extensive control experiments, also on humans, would be necessary. This cannot be justified.

Two alternatives exist: On the one hand – but only in the animal system – work should continue to answer the question of reprogramming the genome. On the other hand, stem cell banks should be considered. Several hundred human embryonic stem cells would likely be sufficient to deliver immunologically tolerable cells for a majority of patients.