

Example of cloning research paper

[Science](#), [Genetics](#)



Cloning has been a subject of great speculation for decades now, with the major breakthrough coming in 1997 after scientist successfully cloned the first mammal, the Dolly sheep. It refers to the process used in the creation of an exact genetic copy of a cell, organism or tissue of an organism. The material, which is genetically a copy of the original cell or tissue, is called a clone. The types of cloning are divided into three; 1) gene cloning in which copies of genes of cell or its DNA are made; 2) reproductive cloning in which a copy of a whole organism is made, and lastly, 3) therapeutic cloning which is aimed at the production of embryonic stem cells.

Of greater importance in human health is therapeutic cloning which aims at the producing embryos which are used by scientists interested in stem cell research. Its goal is not to create cloned human being (which falls under reproductive cloning), but rather to harvest stem cells, which will be very important in the study of human development (embryology) and which can possibly be used in disease treatment. The diseases that may be treated by a break though in this research include diabetes and Alzheimer's. On the other hand, it has been used in genetic engineering to produce microorganisms that produce medications needed for treatment of human diseases. This is seen in the genetically engineered production of penicillin by producing bacteria which have been cloned to produce penicillin in large quantities despite them not being originally able to do so.

The reference here is to human cloning. The experiment is done using human somatic cells and an egg embryo. The DNA of the human somatic cell is harvested and introduced into the yolk cells whose nucleus has been removed. This embryo grows to be identical with the organism that donated

the DNA. The experiment was valid based on scientific method because it was successful and enabled them to gather the information they sort. The research was conducted by the scientists themselves in research labs, so that the information they gave was first hand and not a fabrication or second hand information from other researches. This study has been observed in horticulture for centuries and some organisms like lizards are known to reproduce via reproductive cloning (no fertilization). Also, it has been done on animals with an aim of protecting endangered species by producing their clones and also for agricultural reasons to increase the production of animals. Indeed, meat from cloned animals is sold in the United States without warning labels. It has also been carried out in humans, despite the scientists being unable to isolate stem cells from the formed human embryos. The study has indeed been going on since its conception in the 1930s. Scientists became more intense in their investigation from the 1960s and major breakthroughs have been observed in the late 1990s.

As concerning the human clones, some of the dilemmas they will face are in social and family circles. These children will lack the identity since the female DNA donor will not be their biological mother but will be their identical sisters. This will make them feel like they were deliberately programmed to live a life they would never have chosen. Equally, it would have a bad effect concerning their interaction with other family members. This will have adverse effects on the family structure and may even lead to disintegration of families. Also, the possibility of this technique being misused for cosmetic purposes has sparked a lot of speculations on how it will affect a person's general view on their physique. Equally, society might

put these children under so much pressure that their lives will be of misery and self-hate

Viewed from the therapeutic point, human cloning will be a great benefit in the treatment of certain diseases and as a source of organs for transplant. It may equally pose great danger to society if this technique falls in the hands of quack scientists who may misuse their skills to manipulate others in society.

References

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