

Humans - the laboratory animals of the future

Testbiotech criticises experiments to create chimeric embryos

2 February 2017 / Testbiotech is highly critical of experiments attempting to create chimeric embryos by inserting human embryonic cells into embryos from animal species. In the experiments, human cells were injected into embryos taken from cattle and pigs. The cells then became an integral part of the embryonic development of the pigs, and part of various tissues. Testbiotech is warning against a development which can seriously damage the principle of human dignity. In addition, these experiments carry an inherent risk of increasing the number of new diseases, in particular, if viruses are able to cross over to different species.

"Ostensibly, it is being claimed that these experiments are advancing medical benefits, but any real benefits lie in the far distant future. In fact, to the contrary, it is very likely that there will be some severe negative impacts in the near distant future. This kind of research will not only increase the number of animal experiments, but increasingly humans themselves will become part of the experiments," Christoph Then says for Testbiotech. "It seems that some stakeholders believe that humans are no different to laboratory animals."

The experiments, mostly conducted by researchers from the US and Spain, aimed to create chimeric embryos by using pluripotent human embryonic stem cells. Pluripotent cells are able to develop into all kind of tissues and organs. These human cells were inserted into embryos taken from cattle and pigs in their early stages of development.

The chimeric embryos were transferred to pig surrogate mothers and left to develop for three to four weeks. Most of the embryos displayed abnormal development, but some appeared to develop normally.

Apart from anything else, the experiments raise serious ethical questions and expose legal loopholes. Even under the strict German law for the protection of human embryos, it is not forbidden to create transspecies embryos by adding human embryonic cells to embryos from animal species, such as pigs. Neither is the birth and nurture of these creatures in the lab explicitly forbidden, regardless of the extent to which human characteristics are inherited in the animals.

Testbiotech is further warning that these experiments can lead to the rise of new diseases. For example, during the embryonic development, endogenous retroviruses might find optimal conditions for adapting to the tissues of both species.

Due to the recent developments, Testbiotech has expanded its ongoing campaign "Set limits to biotech" and is demanding that the creation of chimeric embryos and interventions into the human germline are prohibited. Strengthening ethical principles is one of five demands posted on our website for public discussion.

Further information: More information by Testbiotech on "human laboratory animals" [1]

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[1] http://www.testbiotech.org/en/limits-to-biotech/human/basic_paper



