Weekly Discussion

Transgenic animal is one that harbors a foreign gene in its genome. It has been inserted into its genome, deliberately through human effort. The foreign gene has been constructed and inserted into the animal, using recombinant DNA technology. Different technologies enable the recombinant gene to be inserted into the transgenic animal and they are: embryonic stem cell method, pro-nucleus method, retro virus mediated gene transfer. The transgenic gene in the animal serves different functions. For example, it contributes to increased growth rate or increased disease resistance or enhances the nutrient value of a food animal or improves muscle mass or improve wool quality and so on. The transgenic animals are produced for research, pharmacology and for production purposes. As mentioned in the example, it has benefitted human welfare in a number of ways. Humans are the ultimate consumers of the benefits produced by transgenic animals. Transgenic cows carrying extra copies of the casein gene produces 13% more milk protein. Similarly, humanoid organs are produced in pigs for transplantation purposes. Catfish, which carries a growth hormone gene, has a 6 times faster growth rate and is larger than the wild type cat fish. Genetic modification has been done in a number of animals like: mice, goat, sheep, chicken, cow, horse, dogs, fish, cats, spiders, guinea pigs, rabbits and rats. Several ethical concerns have been raised against production of transgenic animals and use of these animals for human consumption. To date, no transgenic animal product has been approved by the FDA. The foreign gene introduced into a transgenic animal can be transmitted to the subsequent generation thorough its germline. Ethical bodies are concerned that the introduction of a human gene into an animal, can eventually blur the barrier between species in the wild. Lot of embryos are killed during the production of transgenic animals. In addition, the safety of transgenic products for human use is doubtful. (Pinkert; Sherlock and Morrey 137-144)

Work cited:

Pinkert, Carl A. *Transgenic Animal Technology*. Amsterdam: Academic Press, 2002.

Print.Sherlock, Richard and John D. Morrey. "Ethical Issues in Transgenics". *Cloning* 2.3 (2000): 137-144. Web.