



Patent Law

Coursework 4

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Dolly the sheep by Roslin Institute (Edinburgh)

- a)** In February 1997, the Roslin Institute, announced that it had developed a cloning technique by which it had created a sheep with the name Dolly. The scientists Keith Henry Stockman Campbell and Ian Wilmut used a cell from an adult sheep, which after a malnutrition treatment was placed into a de-nucleated ovum of another sheep, using a somatic cell nuclear transfer. The two cells fused and developed an embryo, which was implanted in the uterus of another sheep. After the pregnancy Dolly was born, which was genetically identical to its donor genetic material of the original adult cell.

The fact that Dolly has been cloned from an adult cell shows that even differentiated cell types can give any cell type. Therefore, using a patient differentiated cell, we can produce any type of cell he needs. Plus, the possibility of making a whole organism from a single cell, opens the way for developing new therapeutic methods.

The Roslin Institute claimed for patents for the cloning method, as well as for the products of the cloning method including, for example "a live-born clone of a pre-existing, nonembryonic, donor mammal, wherein the mammal is selected from cattle, sheep, pigs and goats".

- b)** The patent claim raised huge ethical issues about cloning technology and the application of the cloning method on humans. The possibility of the creation of human copies created concerns about the protection of human dignity and raised issues related to the basic ideas of life, such as the importance of individuality, the personal and family identity and

the reproductive freedom. The cloning of human beings affects issues of morality, spirituality and religion. In addition, there are fears about the inappropriate practice of this scientific knowledge and its consequences.

- c) The scientists raise both for and against arguments for cloning procedure. The arguments for cloning are that by using this method, we could multiply the organisms which are beneficial for life, like a cow that produces an excellent quality of milk and that with more experiments we could achieve to produce organs necessary to humans who suffer from certain disease, like a new and compatible pancreas for a person who suffers from diabetes. Scientists against cloning, claim that we could harm the diversity among the same species, if we produce a group with the same genes.

Another group that raises strong arguments against cloning is the animal rights activists who consider that cloning violates the animal's rights. Most church representatives are opposed to cloning, calling human arrogance to interfere with the creations of God. The European Parliament is opposed to the cloning of embryos for therapeutic purposes, as ethical dilemmas are set, goes beyond the limits of the rules of research and is contrary to the public policy of the European Union.

- d) Dolly the sheep technology obtained patents which covered both the cloning method and any cloned animal produced as a result, in Europe. (European patent No 0,849,990 and GB patents No 2,318,578 and 2,331,751).

For the US, the Roslin Institute obtained patent protection, only for the cloning method (U.S. Patent No 7,514,258). The U.S. Patent Application, for the products of the cloning method, was rejected and, later, the US Federal Circuit Court affirmed the decision, on the basis that Dolly the sheep does not exhibit "markedly different characteristics" from the donor mammal.

- e) For this specific case, I agree with the United States Patent and Trademark Office. The cloned methodology is, undoubtedly, patentable, as it demonstrates novelty, inventive activity and industrial application. On the other hand, the animal produced by this method, has not an invention profile, as we cannot claim that it did not exist in nature before. Beyond that, I believe, that a patent on the animal itself, is not in compliance with the moral values of respecting the animals life in general.

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