

ANATOLIA COLLEGE MODEL UNITED NATIONS 2008



BIOETHICS COMMITTEE STUDY GUIDES

by the Committee Directors



3rd Anatolia College
Model United Nations

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Dear ACMUN Delegates,

The Directors of this year's Anatolia College Model United Nations have worked extensively in order to prepare the following study guides on the topics which you will discuss in February. These study guides offer the basic knowledge of the topic you should have, so please refer to them not only prior to but also during the conference. Understandably, these study guides should not be the entire basis of your work for ACMUN, but you should also look for further reading sources and ways to expand your knowledge on the topic.

All delegates should have prepared an informal working paper by the conference. The working paper is an unofficial document which consists of basic solutions and suggestions which reflect each delegate's country's policy. Please refer to the section "Questions a Resolution Must Answer" of the study guides – the most important section – in order to author efficient working papers and resolutions. Your chairs can be contacted at the email addresses under their introductory paragraph. Feel free to email them for any questions you might have, as they are the experts on the topics of each committee.

Hopefully you will benefit greatly from these study guides. I am looking forward to meeting you all in February.

Sincerely,

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Bioethics Committee

Topic Area A

The question of stem cell research

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TOPIC AREA A

Statement of the Problem

The rapid development of technology, especially in the fields of biology and medicine created major advancements in research. The focus turned to new areas of research, such as cloning and stem cell research. Stem cells are embryonic cells that are not yet differentiated, thus providing the ability to create any kind of tissue. As obvious, the discovery of these cells' potential caused the initiation of a very large spectrum of research in many fields of study. Namely, they created the hope for alternative treatment of diseases like Alzheimer's and Parkinson's, for the production of new drugs, and for the improvement of tissue transplantation by creating compatible, healthy "copies" of the needed tissue. Together with hope the above discovery upraised a whole range of ethical implications and dilemmas, basically concerning research. These considerations that stemmed from research on biological/medical issues are called bioethics and are one of the most widely debated topics nowadays.

History of the Problem

As mentioned above, the field of bioethics is relatively new. However, the need for international guidelines and principles on research procedures, as well as the ethical and moral implications of the issue led to the creation of the first resolution by the UN General Assembly in 2005. The resolution contains the United Nations Declaration on Human Cloning, which includes the prohibition of human cloning to the degree that it contradicts human dignity. As previously mentioned, cloning is a way to create compatible transplants that may be life saving to a large amount of people worldwide. However, it may also be used for research on reproductive cloning on humans, which is strictly prohibited at a global level. Reproductive cloning is the use of cloning to produce human babies. The above declaration as well as the World Health Organization (WHO) condemn the use of reproductive cloning and only allow the so called therapeutic or non-reproductive cloning. Therapeutic cloning is the creation of embryos in order to excrete some stem cells, which are used for therapy. The concept of stem cells, cloning and, generally, the possibility to create identical human "copies" raise several issues, such as the

psychological effect on the clone and on the cloned individual, the influence that these processes have on our perception of human dignity and on the foundations of our society, such as family, kinship and religion. Some of these issues were discussed in the first Global Forum on Bioethics in 1999. The second meeting of the Forum was held in 2005 and focused on the ethical debates, which arise after research is over. Namely, they examined the role of sponsors and researchers and access to new drugs and vaccines.

One of the most important issues on bioethics is the position each individual society and religion adopts with respect to the initiation of human life and the fundamental boundaries of humans' jurisdiction. In 1997 the Islamic Fiqh Academy decided that cloning is not contradictory with Islamic faith. However, they declared that they oppose any kind of human cloning, since apart from the overstepping of the boundary of human nature, there will be loss of kinship and lineage, which are both central values in Islamic faith. The Roman Catholic Church condemns all types of cloning, while Judaism adopts a very similar perspective to Islam.



Current Situation

A very significant aspect that affects ethical practices in human subject research is the conceptualization of the physician-patient relationship. There are obvious differences in the perception of this relationship between Eastern and Western societies and, thus, between developed and developing countries. In developing countries, such as Pakistan, scientists and physicians constitute the "elite" society. They are highly educated, usually English speaking in a society where the majority is illiterate and very poor. So, physicians are something more than highly respected; they are up to a point worshiped, an idea that is very much supported by the position of healers according to Islam: they are the instrument of God's mercy on Earth. Thus, a very large proportion of the population would never suspect that a doctor has in mind anything but their best interest. On the other hand, in Western developed

countries the public is much more informed about both research processes and about their legal rights. Thus, doctors' approach to bioethics is also limited by the social framework.

Developing countries, exactly due to the illiteracy of a large percentage of the population and the extensive poverty, have become acceptors of multinational pharmaceutical companies' research, such as drug trials. Namely, in a report in the Washington Post in 2005 the representative of GlaxoSmithKline said that within two years the company's "outsourced" clinical trials are expected to rise from 29% to 50%.

Except for the ethical considerations as far as stem cells are concerned, their use on humans is strictly prohibited because the scientific background is not fully known yet; thus, there may be implications that cannot be predicted. As a consequence, private clinics using stem cells for all sorts of treatments lead "a promising technology rapidly into the realm of quackery" (www.emro.who.int/publications). This means that although stem cells may lead to tremendous benefits by offering potential treatments for many incurable diseases, their use in research may be strictly prohibited. This total prohibition may be caused due to avoidable side effects that arise during the unauthorized use of stem cells, which by-passes any strict scientific methodologies and ethical guidelines.

There are a number of ethical issues raised by stem cells and cloning, which have to be considered during the conduction of research. One of the most basic issues is the psychological problems that research may upraise to a possible clone. The status of this individual as "genetic copy" may create an identity crisis or he/she may be dominated by the cloned individual. A sense of belongingness is hard to become established in such cases. This sense is very closely related to the risk of turning human beings into manufactured objects. The idea of an object is supported by the fact that the clone will have no relatives or family. Moreover, the fact that he/she is an identical replication of another person may cause his/her environment to expect certain attitudes or behavior, similar to the ones of his /her genetic progenitor's. This, of course, constrains the individual's life and choices. Additionally, when researching on either stem cells or clones, one cannot ask for the subject's consent, since it does not exist before the experiment. Thus, one cannot force an individual

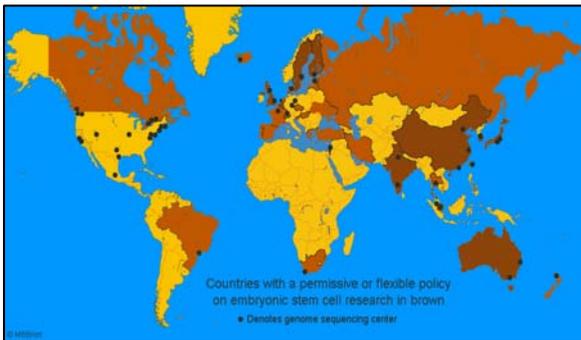
to live a life that may be stigmatized due to the fact that he/she is a genetic copy of another person without permission. Thus, a kind of social class may be formed that will be probably considered inferior or may be subject to genetic racism. That is due to the fact that clones' DNA is already aging when they are born, as it is acquired from a person of a certain age. Thus, clones will have a shorter life expectancy, which could be a reason to even be denied life insurance. Additionally, if these people become aware of any genetic diseases the person they are identical to suffers from, they may become depressed, as they assume that they will have it too. Moreover, if the cloned individual suffers from a certain illness (physiological or psychological), the clone's life will be affected, since he/she may have hardship in finding a mate. That is due to the fact that anyone will suppose that the two individuals will have identical health and lives. This, of course, is inaccurate because the two people may have different habits or lifestyles, similarly to twins.

Another significant question that arises is when the life of an embryo starts. There is considerable disagreement on the time of the initiation of life. Some say that it is the moment of fertilization, others identify it with the time the heart starts beating, while others think it is when the senses start functioning. However, no one actually knows, so how can we decide from what point on destroying cells becomes a murder?

A possible solution to the ethical and political debate created by the question of stem cell research may be given by the latest development in the field: the transformation of adult skin cells into stem cells. Two groups of scientists at the University of Wisconsin-Madison and at the Kyoto University of Japan managed to reprogram specialized skin cells into pluripotent cells. Pluripotency or multipotency is a term referring to the ability of cells to form virtually all cells of the body. The cells created were very similar to embryonic stem cells (ES cells) but not identical. They were used to create heart and brain tissue. The heart tissue created actually started beating after 12 days in the lab. However, the techniques used by both teams rely on retroviruses, a fact that has two risks. Firstly, there is a risk of contamination by the actual virus and secondly, there is danger of incontrollable division of cells leading to the formation of tumors, termed tumorigenicity. On the other hand, this new

experimental procedure avoids the use of ES cells, which account for the ethical controversies in the field. It is important to note that countries like the US have not accepted this new kind of research, as it is considered to be in line with ethical standards. More specifically, George Bush has praised the new type of research. He noted that they will expand funding for “this type of ethical medical research” (tvnz.co.nz), an important decision since the prohibition of such research in the US is thought to have prevented further progress.

Scientists underlie that although the production of stem cells from adult cells is very promising, one has to keep in mind that these cells are not identical to ES cells. This fact could have many consequences. Namely, it is still unclear if the adult cells, otherwise called iPS cells, are equally efficient with ES cells, as Dr. Robert Tsai, assistant professor in the Center for Cancer and Stem Cell Biology at Texas A&M Health Science Center Institute of Biosciences and Technology in Houston, notes. In addition, there are concerns on whether the iPS cells are fully able to differentiate.



Bloc Positions

The position of nations is largely determined by the prominent religion in each nation. Religion is very much influenced by the issues raised by stem cells, as these relate to the fundamental values of every religion and, thus, society. Religious groups hold specific positions, as far as the field of bioethics is concerned. Namely, the Roman Catholic Church rejects all types of tempering with early embryos. On the other hand, Islam permits therapeutic cloning but condemns any kind of reproductive cloning. This is due to their belief that humans are supposed to try and alleviate pain but reproduction and creating life is only God’s work and humans are not allowed to interfere. Judaism holds a very similar point of view with Islam.

Picture 1: World Stem Cell Map (adapted from www.mbbnet.umn.edu)

Countries coloured in light and dark brown in the picture above adopt a flexible or permissive policy on embryonic stem cells research. Countries like Australia, Belgium, China, India, Israel, Japan, Singapore, South Korea, Sweden and the United Kingdom adopt a permissive policy (dark brown). Namely, they allow what is known as therapeutic cloning that involves the transfer of a cell nucleus of a body cell into an ovum that had its nucleus removed. A flexible policy refers to the derivation of stem cells from fertility clinic donations only and often under restrictions (light brown). Therapeutic cloning is not used. Countries with such policy include Brazil, Canada, France, Iran, South Africa, Spain, the Netherlands, Taiwan and others. Countries like the United States, Poland, Austria, Ireland, Norway, Italy and partly Germany have a restrictive policy. Such policies may vary from prohibition of research on human embryonic stem cells to permitting research on previously established stem cell lines, which is of course very limited. Finally, countries like Luxemburg or Turkey have not yet specified any specific regulations/guidelines by legal institutions.

Questions a Resolution Must Answer:

- What kind How can we ensure that ethical guidelines are suitable for each culture/religion?
- How can nations control that the conduction of research takes place based on the ethical principles?
- Should there be universal ethical values that are internationally defined or should each nation adopt different ones? If so, who and how will control the values imposed by each nation?
- How can the UN ensure that developing countries are not used for drug trials and other research conducted by multinational pharmaceutical companies? Is there an alternative way to guard ethical/moral issues and individuals without impeding the current advancement of research?
- What is the role of pharmaceutical companies in stem cell research and how could they be controlled?
- Is there a way to decide on an objective point of the initiation of life, and if not

what can be done to ensure that researchers are not considered murderers?

- How can nations control that any cells derived from humans are used with their informed consent?

Conclusion

Stem cell research is one of the most promising fields of biotechnology and medicine. However, together with potential benefits, risks also come along with stem cell research. Namely, stem cells could provide the opportunity for transplantations, considered almost impossible nowadays, such as bone marrow transplantation. This would eliminate the problems of compatibility and waiting for a long time to get a transplant. On the other hand, stem cells have shown some hints of tumorigenicity, which if not counteracted may cause serious implications in the use of such cells in treatment. Cloning may be used to enlarge the current spectrum of assisted reproduction techniques by providing the possibility to people, especially men, who are not producing gametes to have offspring that have their genome, without involving a third “parent”. On the other hand, the widespreading of cloning could reinforce the desire to clone deceased people, especially loved ones, in order to be able to have them even after their death. All the above situations are some examples of a wide variety of situations where ethical issues are raised. There needs to be strict control over research and ethical guidelines in order to ensure that morality is not sacrificed for the sake of science. A ray of hope that introduced a new dimension in the field of stem cell research may potentially provide a solution to the heated debate on bioethics. Adult human skin cells may be reprogrammed to form pluripotent cells, without the need for the destruction of a human embryo. As expected, this procedure raises some questions too, for example, if the efficiency of such cells is the same as ES cells, which are expected to be answered by further research in the field. Anyway, specialists seem to accept the fact that some questions may never be answered but it is always worth trying.

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