

Bioethics and Biotech

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General Concerns in Bioethics

- ❖ Informed consent/informed choice/informed decision-making
 - Humans as objects of scientific research
- ❖ Purpose of technology
 - Who benefits from technology?
- ❖ Intellectual property rights and ownership
 - Gene patenting, etc.
- ❖ Privacy
 - Genetic screening
- ❖ Playing God
 - Genetic manipulation
 - Creating life

Ethical Concerns Relating to Genetically Modified Organisms (GMOs)



Source: www.habitat.org.uk



Source: www.boku.ac.at

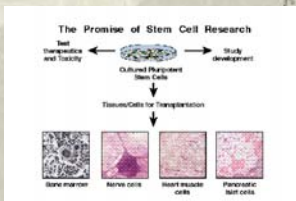
Ethical Concerns Relating to Genetically Modified Organisms (GMOs)

- ❖ Creation of novel organisms
 - Playing God
 - Disruption of ecology
 - Production of potentially harmful food products
 - Who owns the organism's patents?
- ❖ Who benefits?
 - For the multinational company or for the local farmer?
 - For the producer or the consumer?

Ethical Concerns Relating to Stem Cell Research



Source: www.usatoday.com



Source: www.pn-magazine.com

Ethical Concerns Relating to Stem Cell Research

- ❖ Can a *blastocyst* be considered life, specifically *human life*?
- ❖ Is it moral to end the potential of a blastocyst for life, so as to derive a possible form of therapy for those who are ill?
- ❖ Is it right to create (potential) human life, only to destroy it?
- ❖ Should these cells be marketed, having originated from embryos?

Ethical Concerns Relating to Human Cloning



Source: www.milack.com

Ethical Concerns Relating to Human Cloning

- ❖ How human is the human body?
 - Does a clone have a soul? Is this soul the same as that of the origin of the clone?
- ❖ Who is the clone's mother? Father?
- ❖ Eugenic cloning
 - Shall we clone only "normal" or "superior" individuals? Who determines what is normal or superior?
- ❖ Is it scientifically ethical to embark on human cloning research when the technique has not been that successful in animals?

Ethical Concerns Relating to *in vitro* Fertilization and other Methods of Assisted Reproduction



Source: www.ferti.net

Ethical Concerns Relating to *in vitro* Fertilization and other Methods of Assisted Reproduction

- ❖ "Having children without having families"
 - Having a child without sexual intercourse
 - Having a child without any kind of relationship, even with an anonymous biological father
 - Reproduction independent from biological parenthood
- ❖ Commercialization of life through artificial reproduction
- ❖ Morality of "extra-marital" reproduction

Still More Questions...

- ❖ *Biotechnology is advancing at a breakneck pace, yet ethical issues remain unresolved*
- ❖ *When and where do we draw the line in the research and application of biotechnology?*
- ❖ *Can we still halt the unrelenting advance of biotechnology until ethical issues are resolved?*
- ❖ *How can we best address the ethical issues of biotechnology?*

References

- ❖ *Global Bioethics* Volumes 13 and 14, 2001
- ❖ *Pagkatao at Teknolohiya* by Leonardo de Castro, 1998