

In the name of God

Approaches of World Religions to Cloning and Transgenic Animals

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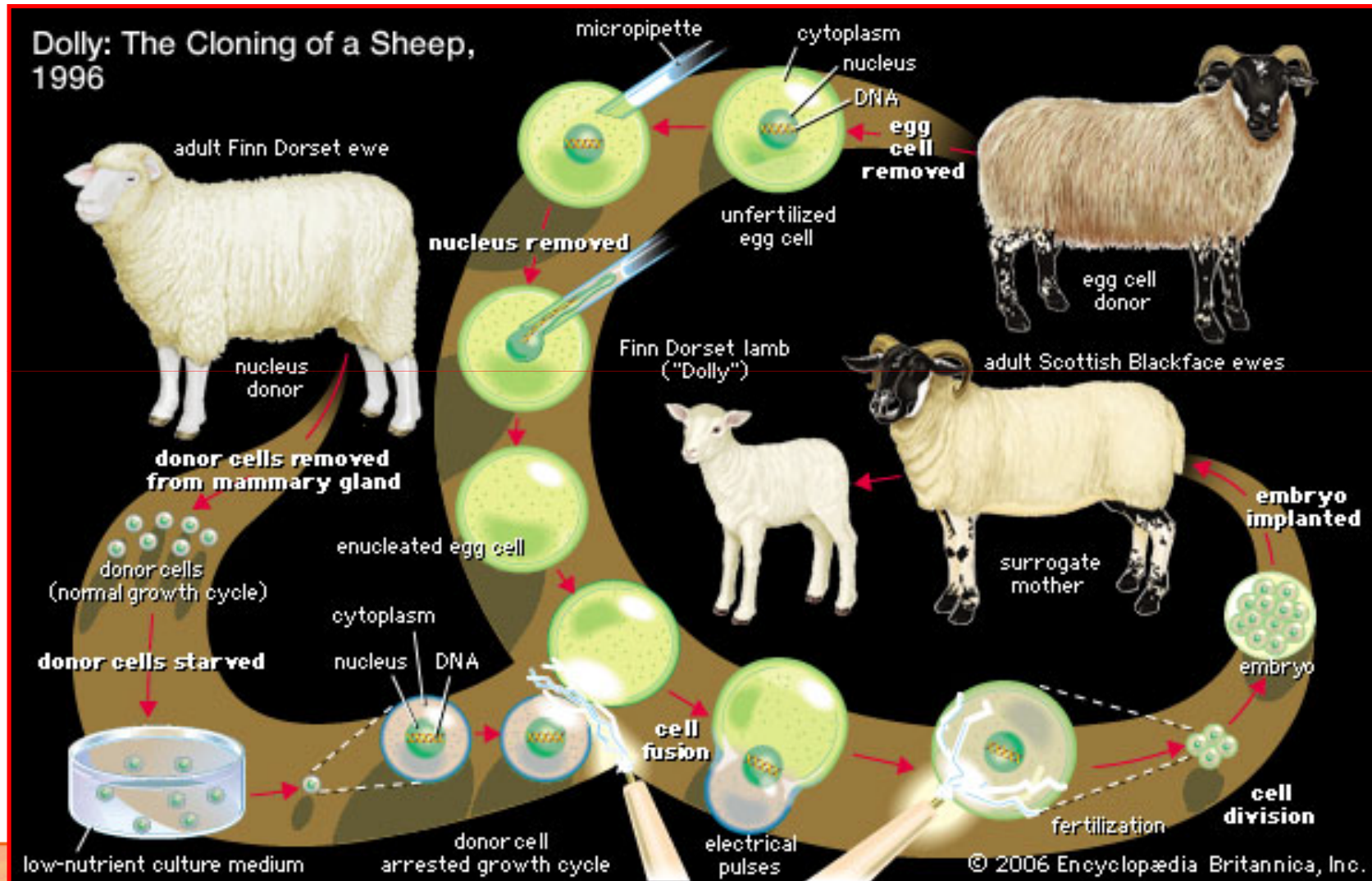
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Dolly: The Cloning of a Sheep

- **Dolly** the sheep was successfully cloned in Britain in **1996** by the scientist “Ian Wilmut” and was put down in February **2003** after developing a **lung infection and arthritis**.
- Dolly was a **genetic copy** of the Finn Dorset ewe.
- Her birth, more than 10 years ago showed that nuclei from specialized adult cells can be reprogrammed into all the cells of an organism.
- The technique that led to Dolly is called
- **somatic cell nuclear transfer** and has
- remained essentially unchanged over
- the last decade.



How to clone?



Other cloned species

- horses
- bulls
- pigs
- mice
- rats
- rabbits
- cats and dogs
- and others.

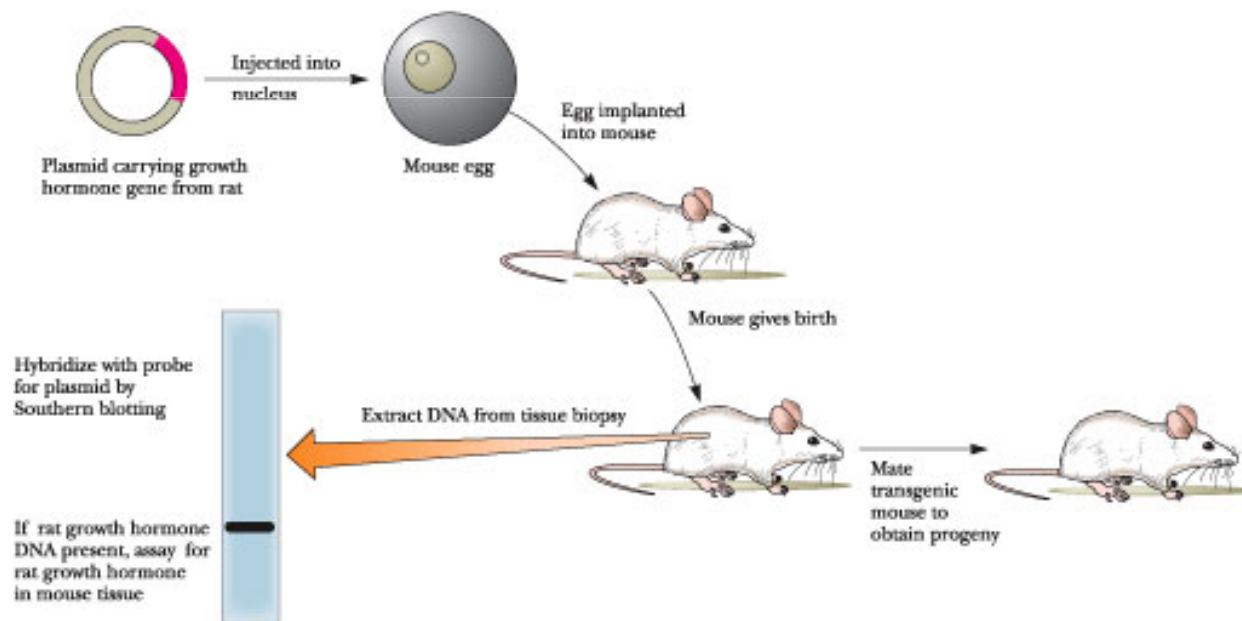
Royana

Iran's first cloned lamb “Royana” was born in the Royan Research Center in Isfahan in 2006.



How to produce Transgenic Animals?

- An Animal that is engineered to carry a foreign gene as part of its own genetic material.



Benefits of Animal Cloning and Transgenic animals

- *Animal cloning* will help solve many problems such as :
 - Having less desirable qualities of livestock
 - Scarcity of food (meat, milk)
 - Shortage of human organ donors
- *And Transgenic Animals* will help us in these ways :
 - Genetically modified animal's cells and organs can be transplanted into humans and By disguising a surface proteins of animal's cells can eliminate rejection of the graft
 - Cure of the Parkinson's and Alzheimer's diseases and etc.
 - produce therapeutic proteins like the proteins in the milk of genetically modified animals to heal diseases such as gastric ulcers, Hemophilia and etc.
 - The discovery of a drug for the treatment of, or vaccination against, a disease.



Hinduism

- *Hinduism does permit cloning if:*
 - It done with divine intent and elimination of world's concerns
 - Not for selfishness and power
 - The benefits to humans outweigh the pain the animals experience, and
 - If there's no other way to get the benefits





Buddhism

Buddha point of view about Animal Cloning

- Regard to the use of animals in science, Buddhists say you must consider 3 factors :
 1. The intentions of the act
 2. The means used and
 3. Its consequences
- In animal biotechnology, if the intentions are good and the consequences are needed and beneficial, then maybe it's justifiable.
- So they Accept the Cloning of Animals, without suffering them.



Judaism

Jewish point of view about Animal Cloning

- The healing of suffering from disease is a *strong imperative in the Jewish tradition.*
- Humans are co-creators with God in the development and perfection of the world.
- Many Jewish scholars support Animal cloning research if it helps us to heal humans more efficiently.

Jewish point of view about Human Cloning

- *Jewish accept the therapeutic cloning*, due to the Jewish theological belief in the necessity of healing disease and relieving suffering.
- In the Jewish tradition a fetus has no status during the first 40 days.
- More to the point, an embryo existing outside of a woman has no legal status in the Jewish tradition.
- Therefore, there is no intrinsic objection to embryo research.
- Jewish law accepts that having children through reproductive cloning When no other method is available and this is perhaps a mitzvah [blessing] in a number of circumstances and is morally neutral in a number of other circumstances.



Christianity

Christians point of view about Animal Cloning

- At the *beginning* of cloning, almost *no Christians raised any objection on animal cloning.*
- But After that, they *oppose the cloning of animals* because creating animals on demand goes *against God's plan for biodiversity.*
- But some *small-scale cloning* work has been approved by some Churches (like GM cattle) .
- If cloning done for economy, convenience or the demands of human preference, it is unacceptable.
- The assumption commonly made was that there was some absolute dividing line between animals and humans.

Restrictions of Animal Cloning In Christians view

- Fundamental *objection to “playing God”*
- *Roman Catholicism* : because it is not based upon any additional information about the intentions of those doing the cloning, the unknown effects of being cloned on the clone itself, possible effects on social institutions, and the like.

Christians point of view about Human Cloning

- *Roman Catholicism* : oppose both therapeutic cloning and reproductive cloning because of the moral status of embryos that they cannot be destroyed to benefit others and appose the second one because it severs human reproduction from sexuality.
- *Protestantism* : some of them condemn both reproductive and therapeutic cloning but many mainline Protestants accept therapeutic cloning and reject the reproductive cloning.



Islam

Islamic point of view about Animal Cloning

- Islam believes that power of creation belongs to Allah alone.
- Science shouldn't create things, but it should make understandable the facts of Allah's creation.
- Cloning as a miracle made possible by Allah, and genetic modification as knowledge made possible by Allah
- Human beings, can actively engage in furthering the overall well estate of humanity by intervening in the works of nature, to improve human health.
- Shiite Muslim religious leaders authorizing animal cloning but banning human reproductive cloning.
- In contrast, Sunni Muslim religious leaders have banned cloning altogether, even in animals.

Restrictions of Animal Cloning In Islamic view

- It should be *free of any harmful effects*
- In line with the rules of *Shari'ah*.
- Means of *betterment for the world, not a cause of damage or concern for human beings, animals or whole life.*

Islamic point of view about Human Cloning

- Shiite Muslim religious leaders authorizing therapeutic cloning but banning reproductive cloning.
- In contrast, Sunni Muslim religious leaders have banned both kinds of cloning.
- the Islamic assessment of reproductive cloning focuses on the effect this technology might have on familial relationships and lack of “spiritual and moral connection between a man and a woman during sexual contact.
- In Islam , an embryo has moral status at 40 days or 120 days. Since therapeutic cloning uses earlier embryos, it does not pose the same ethical problems.

Results

- *Shiite Muslim, many mainline Protestants, Jewish, Hindu and Buddha **accept** animal cloning and therapeutic cloning and **reject** reproductive cloning because of the familial relations, lack of relevant and identity.*
- *Sunni Muslim, Roman Catholics and evangelical Protestants **reject** all kinds of cloning.*





How Hindu treat animals?

- *"The greatness of a nation and its moral progress can be judged by the way its animals are treated." Mohandas K. Gandhi*
- presence of the divine in all beings.
- Animals, like humans, are viewed as manifestations of the divine.
- Prohibit harm to any live creature, which presents restrictions on animal research.
- Under Hinduism all animals, including livestock (cattle and buffaloes), are sacred and must not be killed because this results in ill health or bad luck for individuals and is an offence to the village community.
- Hindu farmers avoid the quilt of killing livestock by selling them to non-Hindu (essentially Muslim) buyers who slaughter the cattle.

How Buddhism treat animals?

- *All beings fear before danger, life is dear to all. When a man considers this, he does not kill or cause to kill. (Dhammapada)*
- In Buddhism Animals are highly respected
- Prohibit harm to any live creature.
- The Buddhist philosophy towards animals is:
 1. No eating - farm animals (***Not Killing and Not Hurting***)
 2. No seeing - performing animals
 3. No using - working animals

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How Jewish treat animals?

- According to the Torah, if we see an animal suffering we are required to help it.
- Torah law requires us *to avoid causing suffer or unnecessary pain to the animal.*
- While we are permitted to use animals for labor, we are not allowed to overwork an animal.
- The law that we must feed our animals before we eat is understood from the order of the verse, "I will provide grass in your field for your cattle and you will eat and be satisfied" (Deuteronomy 11:15) which places the feeding of the cattle before our own eating.
- In Tehillim (Psalms) 145:9 we are taught, "God is good to all, and His mercy is on all His creations." Just as God is merciful to all His creations, so too *must we be merciful to all His creations.*

How Christians treat animals?

- Christians believe that humans must show respect for animals as living creatures.
- Animals have no immortal soul and no intrinsic worth.
- The mainstream attitude in Christianity until recently was that animals are here for our use.

How Muslims treat animals ?

- Animals *possess a psych*
- Animal consciousness, is significantly more than simply instinct and intuition.
- Animals together with all the creation *communicate with God* and are believed to *praise God*, even if this praise is not expressed in human language
- The Holy Qur'an, The Holy Prophet (S) and Ummah enjoin Muslims to *treat animals with compassion and not to abuse them.*
- The Qur'an applies the word "Muslim" not only to humans but also to animals and the inanimate world. In Islamic terminology, for example, *a bee is a Muslim* precisely because it lives and dies obeying the "shariah"