

## **Statement on AIDS (Acquired Immune Deficiency Syndrome)**

Acquired immunodeficiency syndrome (AIDS) and associated conditions are spreading rapidly around the world. On the basis of statistical studies, it is estimated that in the near future, in many countries of the world, every church congregation numbering 100 or more will include at least one member who has a friend or relative with AIDS.

AIDS is transmitted through two major sources: sexual intimacy with an infected person, and introduction of HIV (human immunodeficiency virus) contaminated blood into the body either through injections with unsterile needles and syringes or through contaminated blood products. AIDS can be prevented by avoiding sexual contact before marriage and maintaining a faithful monogamous relationship with an uninfected person in marriage, and by avoiding the use of unsterile needles for injections and assuring the safety of blood products.

Adventists are committed to education for prevention of AIDS. For many years Adventists have fought against the circulation, sale, and use of drugs, and continue to do so. Adventist support sex education that includes the concept that human sexuality is God's gift to humanity. Biblical sexuality clearly limits sexual relationships to one's spouse and excludes promiscuous and all other sexual relationships and the consequent increased exposure to HIV.

The Christlike response to AIDS must be personal—compassionate, helpful, and redemptive. Just as Jesus cared about those with leprosy, the feared communicable disease of His day, His followers today will care for those with AIDS. James advised, "What good is there in your saying to them, 'God bless you! Keep warm and eat well!'—if you don't give them the necessities of life?" (James 2:16, TEV).

This public statement was released by the General Conference president, Neal C. Wilson, after consultation with the 16 world vice presidents of the Seventh-day Adventist Church, on July 5, 1990, at the General Conference session in Indianapolis, Indiana

### **Statement on Ethical Considerations Regarding Human Cloning**

For a number of decades, the prospect that new members of the human family might be produced by cloning was considered farfetched. Recent advances in genetic and reproductive biology, however, indicate that techniques for cloning humans may soon be developed. With this prospect comes the Christian responsibility to address profound ethical issues associated with human cloning. As Christians, with firm belief in God's creative and redemptive power, Seventh-day Adventists accept the responsibility to enunciate ethical principles that emerge from their faith commitments.

Cloning includes all those processes by which living plants or animals are replicated by asexual means—methods that do not involve the fusion of egg and sperm. Many natural processes are forms of cloning. For example, microorganisms, like common

yeast, reproduce by splitting into two daughter cells that are clones of the parent cell and each other. Cutting a twig from a rose bush or grapevine and propagating it into a complete plant also creates a clone of the original plant. Similarly, many simple animals, such as starfish, can regenerate complete organisms from small parts of a predecessor. Thus, the biological principle of cloning is not new.

The new technique is known as somatic cell nuclear transfer. The essence of this method is to take a cell from an existing individual and manipulate it so that it behaves like an embryonic cell. Given the proper conditions, an embryonic cell can proliferate and generate a complete individual. At present, this cellular reprogramming is accomplished by putting a complete adult cell inside a larger egg cell whose nucleus has been removed. The egg that is used in this process serves the role of an incubator, providing an essential environment to reactivate genes of the adult cell. The egg contributes to the offspring only the small amount of genetic material associated with its cytoplasm, not its nuclear genetic material, as occurs in sexual reproduction. The altered egg must then be implanted in an adult female for gestation.

Biologists have developed this technique as a tool for animal husbandry. By this means, they hope to create a herd of valued animals that are genetically identical to a selected individual. The potential benefits from this technology, including the expectation of products for treating human diseases, are of great interest to researchers and to the biotechnology industry. However, the same technological capacity could be used for human reproduction and thus raises serious ethical concerns.

First among these concerns is medical safety. If the current technique of somatic cell nuclear transfer were to be used in humans, ova would need to be obtained from donors. Most of these would perish because of cellular manipulations during early embryonic growth in the laboratory. Others would be lost after implantation, spontaneously aborted at various stages of foetal development. In this respect, sensitivity to the value of embryonic and foetal life would be similar to the development of other methods of assisted reproduction, such as in vitro fertilization. There would likely be an increased risk of birth defects in children brought to term. At present, concern about physical harm to developing human lives is sufficient to rule out the use of this technology.

However, even if the success rates of cloning were to improve and the medical risks were diminished, a number of major concerns would remain. For example, is there anything intrinsically problematic with creating an individual who is not produced through fertilization of an egg by a sperm? Further study is needed to resolve questions regarding the essential nature of procreation in God's design.

Another of the most often expressed concerns is that the dignity and uniqueness of a cloned person may be jeopardized. This risk includes the psychological harm that might be experienced by an individual who would be what some have called the "delayed identical twin" of the individual who provided the initial cell. Do existing persons have the right to exercise such a level of control over the genetic destiny of a new individual?

Concern also exists that human cloning might undermine family relationships. Commitments to both the unitive and the procreative functions of human sexual

relationships might be diminished. For example, the questionable practice of using a gestational surrogate may, at times, be considered. The use of a donor cell from an individual other than the married couple may introduce problems of relationships and responsibilities.

An additional major risk is that cloning could lead to expedient uses of those who are cloned, with their value assigned primarily on the basis of their utility. For example, there could be a temptation to clone individuals to serve as sources of transplantable organs. Others have worried about the deliberate creation of subservient individuals whose autonomy would be violated. Egotistical or narcissistic individuals might be inclined to use the technology in order to "duplicate" themselves.

Finally, the financial costs of cloning would likely be considerable even after significant technological improvements. If human cloning were commercialized, conflicting interests might add to the risk of abuse.

While this is only a partial list of potential risks and misuses of human cloning, it should be sufficient to give pause to Christians who wish to apply the moral principles of their faith to the matter of human cloning. Still, it is important that concerns about the abuses of a technology not blind us to the possibilities of using it to meet genuine human needs\*. The possibility of human cloning, even if remote, motivates this statement of relevant Christian principles.

The following ethical principles are intended to apply to somatic cell nuclear transfer if that technology is ever applied to human beings. The rapid pace of progress in this field will require periodic review of these principles in light of new developments.

1. Protection of vulnerable human life. Scripture is clear in its call to protect human life, especially those lives that are most vulnerable (Deut 10:17-19; Isa 1:16, 17; Matt 25:31-46). The biological technology of cloning is ethically unacceptable whenever it poses disproportionate risk of harm to human life.

2. Protection of human dignity. Human beings were created in the image of God (Gen 1:26, 27) and were thus endowed with personal dignity that calls for respect and protection (Gen 9:6). Cloning may threaten human dignity in a number of ways and must thus be approached with resolute moral vigilance. Any use of this technology that undermines or diminishes the personal dignity or autonomy of human beings must be rejected. This moral prohibition applies to all human cloning that would value human life primarily for its utilitarian function or commercial value.

3. Alleviating human suffering. It is a Christian responsibility to prevent suffering and to preserve the quality of human life (Acts 10:38; Luke 9:2). If it is possible to prevent genetic disease through the use of somatic cell nuclear transfer, the use of this technology may be in keeping with the goal of preventing avoidable suffering.

4. Family support. God's ideal plan is for children to develop in the context of a loving family with the presence, participation, and support of both mother and father (Prov 22:6; Ps 128:1-3; Eph 6:4; 1 Tim 5:8). Any use of somatic cell nuclear transfer as a means of assisting human reproduction should thus be within the

context of the fidelity of marriage and support of stable family life. As with other forms of assisted reproduction, the involvement of third parties, such as surrogates, introduces moral problems that are best avoided.

5. Stewardship. The principles of Christian stewardship (Luke 14:28; Prov 3:9) are important for all types of assisted human reproduction including the possibility of somatic cell nuclear transfer, which is likely to be very costly. Married couples seeking such assistance should consider the expenses involved in terms of their exercise of faithful stewardship.

6. Truthfulness. Honest communication is one of Scripture's mandates (Prov 12:22; Eph 4:15, 25). Any proposed use of cloning should be informed by the most accurate information available, including the nature of the procedure, its potential risks, and its costs.

7. Understanding God's creation. God intends for human beings to grow in their appreciation and understanding of His creation, which includes knowledge regarding the human body (Matt 6:26-29; Ps 8:3-9; 139:1-6; 13-16). For this reason, efforts to understand the biological structures of life through ethical research should be encouraged.

Given our present state of knowledge and the current refinement of somatic cell nuclear transfer, the use of this technique for human cloning is deemed unacceptable by the Seventh-day Adventist Church. Given our responsibility to alleviate disease and to enhance the quality of human life, continued appropriate research with animals is deemed acceptable.

## Glossary

**Allele.** One of the alternative forms of a particular gene. Each gene of an organism can exist in slightly different forms. Those small differences are responsible for some of the variations that we observe in different individuals within natural populations. Different alleles for genes that produce the blood protein haemoglobin, for example, will affect how well the blood cells will carry oxygen.

**Clones.** Two or more individuals with identical genetic material. Human clones occur naturally in the form of "identical twins." Though twins begin life with the same genetic material they, nevertheless, develop distinct physical differences (fingerprints, for example). Furthermore, they become fully unique individuals with distinct personalities as a result of their different experiences and independent choices. An individual conceived by somatic cell nuclear transfer would be at least as different from his or her progenitor as natural twins.

**Cytoplasm.** All the contents of a cell, other than the nucleus. The cytoplasm is the site where many important processes occur, including the assembly of proteins and enzymes, and the manufacture of cell products. The cytoplasm also contains the mitochondria, small bodies that are responsible for the breakdown of food to produce the energy needed for the activities of the cell.

**Embryo.** The early stages of development of a fertilized egg. In somatic cell nuclear transfer, it refers to the early developmental stages of an enucleated egg after it has been fused with a somatic cell.

**Enucleated egg.** An egg cell from which the nucleus has been removed. This is usually accomplished by penetrating the cell with a fine glass needle and withdrawing the nucleus while observing the process under a microscope.

**Germ cell.** Reproductive cell. In mammals and humans, the germ cells are the sperm and eggs (ova).

**Gestation.** The period of time it takes an embryo to develop in the uterus from a fertilized egg to a newborn offspring. Gestation begins with implantation of the embryo in the uterus and ends with birth.

**Nucleus.** The structure within a cell that contains the genetic material or genes. The nucleus is surrounded by a membrane that separates it from the remainder of the cell.

**Ovum (plural: ova).** An egg cell. A female productive cell.

**Somatic cell.** Any cell from the body of a mammal or human, other than the germ cells.

**Somatic cell nuclear transfer.** The technical name for the method used to produce the first animal clone, a sheep called "Dolly." Though the name suggests that a nucleus from a somatic cell was used, in fact, the complete somatic cell was fused with an enucleated egg.

**Sperm.** A male reproductive cell.

\*There may be future situations in which human cloning could be considered beneficial and morally acceptable. It is possible, for example, to imagine circumstances in which cloning may be contemplated within the context of marriage as the only available means of reproduction for a couple who cannot participate in normal procreation. In other cases, potential parents may be carriers of defective genetic alleles, and they may wish to avoid the risk of giving birth to a child with a genetic disease. The use of somatic cell nuclear transfer might assist such parents in having a child who would be free of genetic disorder. Of course, many of the concerns about personal identity and dignity would still remain even in the context of family fidelity. As with other forms of assisted human reproduction, potential blessings of somatic cell nuclear transfer must be weighed against the risks.

*This statement was voted during the Annual Council of the General Conference Executive Committee on Sunday, September 27, 1998, in Iguacu Falls, Brazil.*