



## Committee: Human Rights

# The Question of: the Use of Human Embryos in Scientific Research

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### Introduction:

As science continues to push the boundaries of nature and moves towards new innovative applications, ethical questions and speculations often emerge, sparking widespread debate. Recently, the use of human embryos in scientific research has led to a rapt discussion on the future of science, the definition of life, and of course, human rights.

The question surrounding this entire topic is, “When does personhood begin?” Conception? Birth? The answer is morally controversial and religiously charged. When an individual develops personhood, they are entitled to the human rights set forth in the UN Universal Declaration of Human Rights, Article 3 being the right to life. Therefore, the scientific research on human embryos could be seen as a large human rights violation and loss of human life. On both sides of the situation are principles that the UN strives towards, the first being the alleviation of suffering (through scientific research and the end to major birth defects and diseases) and the second being a respect of human life (given the embryos are indeed considered human).

### The Issue:

#### Embryonic Research:

The potential applications for embryonic research are extremely vast and could alleviate many problems plaguing humanity. Scientists have reason to believe that spinal cord and bone injuries, diabetes, primary or acquired immunodeficiencies, cancer, metabolic and genetic disorders, and a variety of birth defects could be effectively treated or removed.<sup>1</sup> As such, the notion of embryonic research is very compelling across the globe. However, this groundbreaking research may also come at a cost. Depending on your stance as to when a human becomes a human, this research may be infringing upon the right to life of these embryos, ensured by the Universal Declaration of Human Rights. There is no clear physical point as to when a “potential person” becomes a human being and strife continues to exist between groups with different views. Traditionally, and before the 19<sup>th</sup> century, life was considered to begin at “the quickening” or the first kick a baby produces while in its mother’s womb.<sup>2</sup> However, with the advancement of science, it can be discerned if an embryo is likely to mature within fourteen days of conception in what is known as the ‘14 day rule’. As of late, many countries have used this as a marker as to which human life begins. Others believe that life begins at conception, birth, or when a baby is

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<sup>1</sup> <http://pediatrics.aappublications.org/content/108/3/813>

<sup>2</sup> <https://www.wired.com/2015/10/science-cant-say-babys-life-begins/>



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able to survive outside of a womb (this marker is constantly changing with the advancement of growth hormones and medical knowledge regarding premature births). As such, the UN and international community has had trouble discerning as to whether or not human embryos have a right to human rights that warrant action. Seeing as the research often results in the destruction of the embryo, it could be seen as stripping them of their right to life.

If the UN were to take action regarding this issue, it would clearly dissatisfy a large populous regardless of the decision they make. If they were to support research, claims would be made that the UN no longer follow the Charter upon which they were founded on. Similarly, by restricting research, the UN would find similar backlash. As such, the UN has been hesitant and unable to make much progress on the topic.

### In Vitro:

In Vitro fertilization is often used when traditional fertilization has not resulted in conception. Taking the oocytes from the respective mother and introduce them to sperm from the respective father in order to create a fertilized oocyte in a controlled environment (oftentimes an IVF clinic). The oocyte is then returned to the mother's womb in which it often times develops into an embryo, and then a child. The process of In Vitro fertilization is often unsuccessful so doctors often create more oocytes than necessary in order to try again if one is rejected. As a result, many oocytes go unused and are frozen or considered medical waste.

Many have seen the potential in using these unused oocytes and embryos to conduct research under the assertion that they were unable to and would not become human life. So far, the international community has remained open to the possibility of this solution. However, they have implored scientists to respect the right to privacy of donors (Article 12 of the Universal Declaration of Human Rights)<sup>3</sup>, and that donations must not have any monetary incentive for the donor.

### Religion:

Religion has played a large role in determining public support for embryonic research. The religious texts of the three most prominent religions do not clearly specify when life begins and has led to widespread debate upon the texts and religious ideals. Across all religions, it has been agreed that human life must be respected and disease must be treated, however they disagree as to what constitutes human life and to what lengths disease must be treated.

Conservative Christians have continued to hold the position that life begins immediately at conception. As a result, Christians generally do not support the notion of embryonic research. They claim that in spite of the potential health benefits, the destruction of human embryos makes the cost of research too high.<sup>4</sup>

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<sup>3</sup> <http://www.un.org/en/universal-declaration-human-rights/>

<sup>4</sup> <https://news.harvard.edu/gazette/story/2007/03/stem-cells-through-a-religious-lens/>



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Generally, Judaism supports the idea of embryonic research and their position on when life begins aligns with their ideology. In their opinion, embryos do not become human until forty days after conception. As a result, embryonic research does not violate human rights, as there is no human in the first place.<sup>5</sup>

Muslims believe that the human soul enters a developing baby between forty and one hundred and twenty days after conception. Therefore, similarly to the Jews, Muslims support the idea of embryonic research in an effort to treat disease and birth defects in humans with a soul.<sup>6</sup>

Many prominent religious groups have conflicting views on the issue and only further complicate the problem and make it more difficult to find a single solution to appease each group and the general public.

### Related Embryonic Applications:

#### Mitochondrial Replacement Techniques (MRT's):

MRT's are newly emerging techniques that could remove dysfunctional mitochondria in eggs or embryos and erase mitochondrial diseases found in young children. These diseases have a large impact on human life resulting in debilitating physical, developmental, and cognitive disabilities, and could be completely avoided given research towards the application of this new technique. However, the International Society for Stem Cell Research (ISSCR) continues to remain skeptical, as the risks of such applications are not yet known.<sup>7</sup> However, research and clinical testing has recently been approved in the United Kingdom and the United States.<sup>8</sup> This just shows how at times, scientific breakthroughs move faster than the restrictions or cautionary procedures put in place to evaluate risk and reward.

#### CRISPR-Cas9:

Perhaps an even more controversial scientific breakthrough, CRISPR lies on the forefront of scientific innovation and moral public opinion. CRISPR gives scientists the ability to modify the nuclear genes of gametes and embryos, potentially erasing unwanted mutations and a vast array of diseases. Similarly to the MRT's, the ISSCR believes that there is still much more research is needed delving into the potential drawbacks of such applications before scientist begin altering the human genome. As such, the ISSCR has prohibited any attempt to alter the nuclear

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<sup>5</sup> ibid

<sup>6</sup> ibid

<sup>7</sup> <https://www.nature.com/news/policy-global-standards-for-stem-cell-research-1.19908>

<sup>8</sup> ibid

human genome at this time.<sup>9</sup> It should be noted that although they oppose gene editing at this time, they continue to endorse the derivation of stem cells from human embryos.

### Key Events:

Event	Description
Initial Founding and Implementation of CRISPR (1993-2005)	Ground breaking and ethically complex technology finds its roots. Regulations were scarce at this time, and innovation expedited.
General Assembly adopts United Nations Declaration on (Human Cloning March 8, 2005)	Enables countries to take necessary measures to ensure human rights. Has remained quite subjective in interpretation.
Universal Declaration on Bioethics and Human Rights (October 2005)	Shows the international need and desire for regulation
CRSIPR-Cas9 genome editing (2013)	Embryonic genome editing introduces more medical potential and even more ethical controversy.
Using Stem cells researchers create patient specific heart cells, reverse the effects of blindness, and replace part of the human brain (2015-Present)	Shows the potential for embryonic research to improve human quality of life

### Previous Attempts to Solve the Issue:

- Implementation of the ISSCR and the Stem Cell Research Oversight (SCRO) to oversee possible implications research may cause
- General Assembly adopts United Nations Declaration on Human Cloning (2005)
  - Member States were called on to protect human life in the application of life sciences and prohibit the application of genetic engineering techniques that may be contrary to human dignity<sup>10</sup>
    - Essentially, the decision on how to approach this resolution is up to each individual country on how they define “human life”

### Possible Solutions:

- Human embryonic research should be endorsed in order to achieve the health benefits such research could achieve as fast as possible.

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<sup>9</sup> ibid

<sup>10</sup> <https://www.un.org/press/en/2005/ga10333.doc.htm>



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- Development of an International Database to store embryonic data and reach solutions quicker and more effectively
- Human embryonic research should be considered a human rights violation and tighter regulations should be placed on research in the related field.
- Human embryonic research should receive more regulation until the risks have been carefully identified and the applications are proven safe.

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