



INTERNATIONAL SOCIETY FOR STEM CELL RESEARCH

ISSCR ENDORSES FETAL TISSUE RESEARCH AS ESSENTIAL

The International Society for Stem Cell Research (ISSCR) is the world's leading professional organization of stem cell scientists, representing more than 4,000 members in 45 U.S. states and 65 countries around the world. The ISSCR is opposed to recent efforts to inappropriately limit or prohibit biomedical research using fetal tissue. These proposals, if enacted, would obstruct critical biomedical research and inhibit efforts to improve human health. If enacted in the past, such limits would have delayed or prevented the development of therapies that have saved millions of lives.

Research using donated fetal tissue has been underway since the 1930s and has made major contributions to our understanding of biology and the development of new medical technologies. Fetal tissue is obtained from spontaneous miscarriages and legal abortions. In each case, the fetal tissue would be discarded if not donated by patients for medical research. With the consent of donors, this unique and valuable tissue can be used for research into basic biological processes and human development, as well as creating new treatments for life-threatening diseases.

Fetal tissue is an essential "gold-standard" resource that enables laboratory-based research into how human tissues and organs develop. While other approaches, such as using animal models and cells from adults, can be helpful, for some congenital and developmental conditions it is necessary to study human fetal tissues. For example, without fetal tissue research, it would not be possible to fully understand congenital defects in the heart or nervous system, and new therapies for diseases that affect these tissues would be delayed or prevented.

Further, some of the most important fetal tissue research has involved the use of fetal cell lines in developing vaccines for many diseases, including measles, mumps, rubella, chicken pox, diphtheria, tetanus, whooping cough, polio, hepatitis A, hepatitis B, rabies, shingles, and adenovirus infections. Millions of lives have been saved as a result of this research. The development of the polio vaccine, which relied on the use of cultured cells from fetal tissue, has prevented hundreds of thousands of cases of polio each year and was recognized with a Nobel Prize in 1954. The April 25, 2014 U.S. Center for Disease Control and Prevention's Morbidity and Mortality Report estimated that as a result of childhood immunizations, there were 322 million fewer illnesses, 21 million fewer hospitalizations, and 732,000 fewer deaths among children born in the United States between 1994 and 2013 (<http://www.cdc.gov/mmwr/pdf/wk/mm6316.pdf#12>). A great many of these lives were saved as the result of research using fetal tissue.

In addition to their historical role in vaccine development, the U.S. National Institutes of Health recognizes the use of fetal tissue in research into maternal health, premature births, and infant health as "irreplaceable". Premature infants often show delays in neural development, affecting memory, thought, and language. Using fetal brain tissue, researchers have discovered that the production of new brain cells, which normally continues throughout fetal development, is impaired by premature birth. This discovery makes it possible to explore new approaches



INTERNATIONAL SOCIETY FOR STEM CELL RESEARCH

to promote normal brain cell development in premature babies. Our understanding of the causes of retinopathy of prematurity, a leading cause of blindness in premature infants, has been advanced by fetal tissue research.

Fetal tissue has also allowed researchers to test cell-based approaches to a variety of neurodegenerative diseases that do not have any other effective treatment. Clinical trials of these fetal tissue-derived cells are currently ongoing for amyotrophic lateral sclerosis (ALS or Lou Gehrig's disease), spinal cord injury, stroke, and age-related macular degeneration.

In closing, fetal tissue research has led to many new insights into human development as well as therapies that have saved millions of lives. Ongoing access to human fetal tissue that has been obtained legally and with donor consent is required to address many important questions in biomedical research and for the development of new therapies. The ISSCR endorses fetal tissue research as essential to the prevention and treatment of life-threatening diseases.