

August 28, 2017

The Honorable Thad Cochran  
Chairman  
Senate Committee on Appropriations  
United States Senate  
113 Dirksen Senate Office Building  
Washington, D.C. 20510

The Honorable Roy Blunt  
Chairman  
Senate Subcommittee on the Departments of Labor,  
Health and Human Services, and Education  
United States Senate  
260 Russell Senate Office Building  
Washington, D.C. 20510

The Honorable Patrick Leahy  
Ranking Member  
Senate Committee on Appropriations  
United States Senate  
113 Dirksen Senate Office Building  
Washington, D.C. 20510

The Honorable Patty Murray  
Ranking Member  
Senate Subcommittee on the Departments of Labor,  
Health and Human Services, and Education  
United States Senate  
260 Russell Senate Office Building  
Washington, D.C. 20510

Dear Chairmen Cochran and Blunt and Ranking Members Leahy and Murray:

On behalf of the millions of patients throughout the nation and around the world, as well as the scientific and medical communities dedicated to advancing human health, the undersigned organizations and institutions write to express our collective and strong opposition to prohibitions or restrictions that would further impede the use of federal funding for fetal tissue or embryonic stem cell research. If enacted, this legislation would severely obstruct research that is necessary for the development of new treatments for a wide range of serious and incurable diseases.

Public policy that facilitates ethically responsible research and development is in the best interest of patients worldwide. Decades of thoughtful deliberation on fetal tissue and embryonic stem cell research has provided an ethical and policy framework for valuable medical research to progress, which has enabled the discovery of new treatments that would not otherwise have been possible. We believe the ethical considerations fall heavily in favor of permitting continued federal funding of fetal tissue research, conducted in accordance with current federal rules. To do otherwise would be disruptive and devastating to patients and biomedical science in the long term.

**Fetal tissue research advances scientific knowledge, improves human health, and saves lives**

Fetal tissue research has been critical for scientific and medical advances that have saved the lives of millions of people; including the development of vaccines against polio, rubella, measles, chickenpox, adenovirus, rabies; and treatments for debilitating diseases such as rheumatoid arthritis, cystic fibrosis, and hemophilia.

Fetal tissue remains a critical resource that enables research into how human tissues develop and are impacted by disease. Using fetal tissue allows researchers to more fully understand congenital defects such as those of the heart or nervous system and to understand how viruses like the Zika virus impact fetal development. Indeed, the use of donated fetal tissue has been critical for understanding how Zika virus crosses the placenta and impacts human brain development. The insights gained through studies of Zika virus in human fetal tissue are already guiding the development of medications to prevent transmission of the virus. These examples illustrate how legislation that limits human fetal tissue research would hinder the development of critical new treatments and thus potentially cost lives.

It has been incorrectly stated that other cells can be used to replace fetal tissue in biomedical research. In fact, fetal tissue represents a specific, formative period and the cells in fetal tissue have unique and valuable properties that often cannot be replaced by other cell types. Cells from fetal tissue are more flexible and less specialized than cells from adult tissue and can be expanded in culture. This is part of the reason why cells from fetal tissue were used in the generation of many of the vaccines that are used today. The study of human fetal tissue also helps researchers understand how birth defects arise and how they can be prevented. It provides an unparalleled window into the complexity of human tissue development, including why serious congenital defects sometimes arise.

Tissue from spontaneous abortions is not a reliable substitute for tissue from “induced” abortions.<sup>1</sup> Spontaneous abortions, commonly called miscarriages, often result from genetic defects, developmental abnormalities, or other conditions that undermine the usefulness of the tissue for research and generally do not occur in settings where the fetal tissue can be adequately preserved for research.

### **Restricting NIH embryonic stem cell research will have a devastating impact on medical research**

Embryonic stem cells, and the specialized cells they give rise to, have been used to test new drugs and to develop potential therapies to repair damaged tissues in patients. It is already the case that federal funding cannot be used to derive embryonic stem cell lines. Further restrictions on these efforts could shut down critical academic and industry research necessary for the development of new treatments for a wide range of serious and incurable diseases. Such arbitrary limitations could leave Americans waiting longer for life-saving cures and treatments.

Human embryonic stem cells have the potential to make any cell type in the body in unlimited quantities. In contrast, stem cells from adult tissues are limited in the types and quantities of cells they can make. The discovery that human adult cells can be reprogrammed to an embryonic-like pluripotent state (human induced pluripotent stem or iPS cells) does not remove the imperative to pursue embryonic stem cell research. Human embryonic stem cells remain the benchmark for assessing pluripotency and the ability of cells to develop into all cell types in the body.

Embryonic stem cell research, together with breakthroughs in iPS and adult stem cell technologies, will yield the insights that make medical advances possible. We need to ensure that researchers are equipped to pursue all forms of stem cell research and to discover the root causes of disease and develop the breakthrough medicines of the future.

The impact of the original derivation and subsequent worldwide distribution of human embryonic stem cells unlocked an entire new field of regenerative medicine. The resulting progress in research and advances in technology were unimaginable just a quarter century ago.

Research on embryonic stem cells has already yielded scientific breakthroughs that have contributed to our understanding of human development as well as disease processes. Human embryonic stem cell research is producing innovative approaches to treat diseases that represent major public health problems, and cells derived from human embryonic stem cells are now being tested in clinical trials as treatments for diabetes, spinal cord injury, heart failure, macular degeneration and Stargardt’s macular dystrophy. Neurons derived from human embryonic stem cells will enter clinical trials in 2018 to test a new treatment for Parkinson’s disease. Blocking federal funding for human embryonic stem cell research and its applications would impede this research and slow the development of new therapies for these and many other diseases.

### **There are well-established, rigorous oversight and regulatory frameworks for fetal tissue and embryonic stem cell research**

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<sup>1</sup> The language in the House Labor, Health and Human Services bill, Section 528, would prohibit “funds being used to conduct or support research using human fetal tissue if such tissue is obtained pursuant to an induced abortion.”

Rigorous legal and ethical oversight of fetal tissue and embryonic stem cell research has been in place for decades. Both areas of research have garnered bipartisan support in the U.S. Congress and have been funded by the National Institutes of Health (NIH). Numerous federal panels and reviews, conducted under both Republican and Democratic congressional majorities and presidential administrations, have evaluated human fetal tissue and embryonic stem cell research and have concluded that they are critical for important and often lifesaving biomedical research. This research has long been viewed as good public policy to improve human health and has proceeded with public support.

Human fetal tissue and embryonic stem cell research are critical to addressing important questions in biomedical research, and for the development of new therapies and cures. Legal and ethical frameworks in place ensure appropriate oversight, and that human embryonic and fetal tissue is obtained legally and with donor consent. We urge you to oppose restrictions to this research and to support the families who are relying on biomedical research to develop new treatments for diseases that affect millions of lives around the world.

Sincerely,

Addiction Medicine Foundation  
Academic Pediatric Association  
Alliance for Aging Research  
American Academy of Pediatrics  
American Association for the Advancement of Science  
American Association of Colleges of Pharmacy  
American Congress of Obstetricians and Gynecologists  
American Pediatric Society  
American Society for Cell Biology  
American Society for Investigative Pathology  
American Society for Reproductive Medicine  
American Society of Gene & Cell Therapy  
American Society of Hematology  
Americans for Cures  
Association of Academic Health Sciences Libraries  
Association of American Medical Colleges  
Association of American Universities  
Association of Independent Research Institutes  
Association of Medical School Pediatric Department Chairs  
Association of Medical and Graduate Departments of Biochemistry  
Association of Public and Land-grant Universities  
Boston University  
Christopher and Dana Reeve Foundation  
Coalition for Cell Biology  
Coalition for the Life Sciences  
Columbia University Medical Center  
Council on Governmental Relations  
Harvard University  
Indiana University  
International Society for Stem Cell Research  
Johns Hopkins University  
Medical Library Association  
National Multiple Sclerosis Society  
New York Stem Cell Foundation  
New York University  
Pediatric Policy Council

Prevent Cancer Foundation  
Regenerative Medicine Foundation  
Research!America  
Rutgers Biomedical and Health Sciences  
Society for Pediatric Research  
Stanford University  
Stony Brook University  
SUNY Upstate Medical University  
Texans for Cures  
The American Thoracic Society  
The Michael J. Fox Foundation for Parkinson's Research  
The Nebraska Coalition for Lifesaving Cures  
The Ohio State University  
The State University of New York System  
Tuberous Sclerosis Alliance  
University at Buffalo- The State University of New York  
University of California System  
University of California, Davis  
University of California, Riverside  
University of California, San Francisco  
University of Michigan  
University of Minnesota  
University of Pennsylvania  
University of Pittsburgh  
University of Washington  
University of Wisconsin – Madison  
Yale University