



UNFAVORABLE

HB625/SB585 Human-Relevant Research Fund- Collection of Contributions – Responsible Entity

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We Oppose Testing Using Embryonic or Fetal Human Beings

On behalf of the Board of Directors of Maryland Right to Life, we urge your UNFAVORABLE report on HB625/SB585 to prohibit the further funding and unethical use of human beings in their embryonic or fetal stages of life, for the purpose of biomedical or commercial research and testing.

While made legal in Maryland, and suggested as the more humane alternative to testing on “non-human animals”, the vast majority of people oppose public funding for testing on human remains derived through abortion violence and federally prohibited human organ harvesting.

There are ethical forms of testing, including ethical forms of human-relevant research that can spare both human and non-human animals from inhumane treatment and destruction. These ethical methods should be adopted as the preferred methods by the State of Maryland and all contractors receiving public funding through the State. The Human-Relevant Research Fund should remain under the management of the Maryland Department of Health.

Federal Defunding of Unethical Research

The U.S. Department of Health and Human Services (HHS) and the National Institutes of Health (NIH) have recently **ended federal funding** for research using human fetal tissue derived from elective abortions.

This bill seeks to circumvent or evade federal oversight on harvesting and testing on aborted human fetal remains imposed by the United States Department of Health and Human Services by reassigning management of Human-Relevant Research Fund from the Maryland Department of Health to the Maryland Department of Agriculture. If enacted, this political shell game will likely be addressed by HHS and jeopardize additional federal funding for research and other purposes in Maryland.

Unethical Methods Human-Relevant Research

We strongly object to any “Human-Relevant” testing methods that use embryonic or fetal cells or tissue derived from aborted human beings. In “human relevant” research—science designed to study human systems directly rather than using animal models—fetal tissue is prized because it contains unique progenitor cells that have not yet “committed” to a specific role.

Researchers use aborted fetal tissue to create “humanized” models in a variety of unethical ways:

- **Humanized Mouse Models:** Researchers transplant fetal immune cells or liver tissue into mice with “deleted” immune systems. This creates a mouse that grows a **human-like immune system**. This method is in demand for HIV research.

- **Neurodevelopment:** Fetal brain tissue is the "gold standard" for understanding how the human brain maps its connections. It is used to validate **organoids** (lab-grown mini-brains) to ensure they actually mimic real human development.
- **Vaccine Production:** While most modern vaccines use cell lines from babies aborted decades ago (like baby "Adam", identified by science only as "Human Embryonic Kidney, experiment number 293 (HEK-293) and baby "Eve", aborted in 1985 and identified only as PER.C6), new research uses primary fetal cells to study how emerging pathogens cross the placental barrier.

Ethical Options for Human-Relevant Research

Because of the ethical controversies and new legal restrictions, government agencies and the scientific community have pivoted toward technologies that are considered more "human relevant" without the need for fetal tissue:

- **Organoids:** "Mini-organs" grown from adult stem cells. (Unethical if embryonic/fetal cells used.)
- **Tissue-on-a-Chip:** Microchips that mimic the mechanics and physiological response of human organs.
- **Induced Pluripotent Stem Cells (iPSCs):** Adult skin or blood cells that are "reprogrammed" to act like embryonic stem cells.
- **Ethical Tissue Donation:** resulting from natural miscarriage or stillbirth, as opposed to abortion.

Human Embryo Testing is Unethical

Embryonic stem-cell research is routinely touted by supporters as having the potential to cure a number of diseases and medical conditions. However, the procedure for obtaining embryonic stem cells is fraught with ethical and scientific pitfalls and, importantly, such research has yet to yield an effective treatment for any disease or condition.

Living human beings in embryonic stage are killed in embryonic stem-cell research and human cloning. Specifically, embryonic stem-cell research is done by taking a days-old embryo that has grown to the several hundred-cell stage, breaking it apart, and taking the cells from the embryo's inner mass. These unspecialized cells are then grown and used for research, including by implantation in animals and resulting animal-human hybrid abominations that disregard the dignity of each human life.

Embryonic Testing is Unsuccessful

More than 15 years after the first isolation of embryonic stem cells, there is not a single disease that these cells can cure, regardless of whether the embryonic cells are created through the fusion of a human sperm and egg or through cloning. In fact, Geron Corporation, the company that received governmental approval for the first clinical trials using stem cells derived from human embryos, discontinued "further stem cell work" after "a strategic review of the costs... timelines and clinical, manufacturing and regulatory complexities associated with the company's research and clinical-stage assets."¹

¹ See M. Smith, *Geron Move Shows Embryonic Stem Cell Research Not Successful*, LifeNews (Nov. 15, 2011), available at <http://www.lifeneews.com/2011/11/15/geron-move-shows-embryonic-stem-cell-research-not-successful/> (last visited June 26, 2017).

Conversely, there are proven, ethical alternatives to research using stem cells from human embryos. One important source is umbilical cord blood—a very rich source of stem cells. Another is adult stem cells, which can be obtained from various organs. For example, researchers know that bone marrow cells can form into fat, cartilage, and bone tissue. A third promising source is neural stem cells. These stem cells have been successfully isolated and cultured from living human neural tissue and even from adult cadavers.

Moreover, since 2007, research breakthroughs are opening the door for the “reprogramming” of adult stem cells into the embryonic state—without the use or destruction of human embryos.

In Conclusion

In sum, any alleged “therapeutic” purposes for destructive embryo research have proven to be speculative, while simultaneously crossing ethical boundaries and taking human life. As such, states should prohibit this ethically problematic research that has proven completely unnecessary, including unethical methods of human-relevant research that uses embryonic or fetal cells or tissues instead of adult cells.

For legislators and policy makers, it is vitally important that careful attention be exercised to avoid some types of research (especially in the area of cloning) that are ineffective or that create incentives or demand for researchers to destroy preborn human life and increase the demand for aborted fetal tissue including late term, fully developed human organs.

For these reasons we urge your unfavorable report to ensure that any testing methods licensed or funded by the State of Maryland are ethical and prohibit the use of cells or tissues obtained from aborted embryonic or fetal human beings. The state instead should encourage the development of ethical alternatives, including ethical human-relevant research methods utilizing adult cells.

For more information about ethical human-relevant research methods, please refer to the attached research article *Fetal Tissue Research and Christian Bioethics: A Review of Scientific Developments, Policy Landscape and Ethical Considerations* (David Prentice, PhD, 2022).

