U.S. Rep. Grothman: Debunking the myth of fetal tissue research

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Contact: Timothy Svoboda, (202) 225-2476

(Washington, D.C.) – Today, at a House Committee on Oversight and Government Reform Committee hearing, Congressman Glenn Grothman (R-Glenbeulah) questioned expert medical researchers about the effectiveness of fetal stem cell research.

Key Takeaway 1: According to the experts, stem cells created from adult samples, called pluripotent stem cells, have yielded far greater results than stem cells taken from fetal tissue.

Key Takeaway 2: When asked why fetal tissue studies are not foregone for the more effective pluripotent stem cells, Dr. Prentice replied that some scientists are "trained in a certain way and we may be reluctant to switch to something new, even if we know that it's better and potentially more productive".

Witnesses included:

· Dr. Tara Sander Lee, Associate Scholar at the Charlotte Lozier Institute

· Dr. David Prentice, Advisory Board Member at the Midwest Stem Cell Therapy Center

· Dr. Sally Temple, Board Member and Former President at the International Society

for Stem Cell Research

Excerpts of Grothman's questioning

Congressman Grothman: "First question is for Dr. Prentice. You don't use fetal tissue at the Midwest Stem Cell Therapy Center, correct?"

Dr. Prentice: "No, Congressman."

Grothman: "Has this prohibited you from doing cutting-edge research?"

Prentice: "None of the research at the Midwest Stem Cell Therapy Center uses aborted fetal tissue, but they have made great strides in spite of that. And probably because of that."

Grothman: "That's interesting that you say 'because' of it, and there are other centers like yours around the country. Can you explain why, first of all some of the progress you've been making, and second why you feel you're being able to make progress at a greater rate than some of the centers who feel they have to use fetal tissue?"

Prentice: "The origin of that- not using the aborted fetal tissue, quite frankly, was from the legislature that initially set up the Midwest Stem Cell Therapy Center. And, part of the reason was to focus on the more successful adult stem cells and the potential treatment to get this into the clinic faster for the patients. So I mentioned one of the clinical trials. It's a homegrown clinical trial, first of its kind, to treat Graft v. Host disease using an adult stem cell source. That clinical trial is still ongoing so this is very early. But, the initial results seemed very successful. In association with the Bone Marrow Transplant Center they have been treating a number of different cancers as well as anemias, including sickle cell anemia. They have also engaged in this stroke study to treat patients who have experienced stroke even years in the past."

Grothman: "Overall in our country, why? Has there been more progress with adult stem cells or fetal tissue research?"

Prentice: "There's much more from adult stem cells. Not even close"

Grothman: "Why do you think when it's not even close are there some people out there who insist, is there something psychological going on? This apparent love

affair with fetal tissue, why psychologically would people prefer to use that than the more effective adult stem cells?”

Prentice: “Well, I think in some cases, as a scientist, we’re trained in a certain way and we may be reluctant to switch to something new, even if we know that it’s better and potentially more productive. But, Congressman, I’d like to make a point about that, that when we do step out, great things can happen. And if I could give you just one brief example, if we look in the stem cell field, if we look at the production of these induced pluripotent stem cells, a Japanese scientist, Dr. Yamanaka came up with a few years ago. One of his reasons, frankly, was he looked through the microscope at an embryo in a colleague’s lab and said ‘you know we can’t see much difference between this and my daughter’s. We can’t keep destroying embryos. There must be a better way to get the same kind of cell.’ He came up with these IPS cells, which mimic pretty much everything an embryonic stem cell can do and won the 2012 Nobel Prize for it.”

Grothman: “Okay, I sometimes wonder when it comes to politicians, we’re always pushing the fetal tissue because they’ve been so invested in abortions and they ant abortions to be good that they just want to believe that fetal tissue research is superior. I don’t want to let you alone Dr. Sandra Lee. Can you tell us a little about reprogramming adult stem cells into pluripotent cells?”

Dr. Sander Lee: “Yes, so you can generate what’s called induced pluripotent stem cells from sematic cells. So for example you can take a skin biopsy from an adult human and you could isolate the skin cells and you can reprogram them, you can give them specific factors that allow them to differentiate and basically revert back to an embryonic-like state. And then those cells, those pluripotent cells, can be further reprogrammed into what are called organoids, which are simply organs in a dish. They can be studied and have comparable, similar cell components to what we see in the fetus.”

Grothman: “Can you give me examples of some sort of treatments that are evolving out of this?”

Sander Lee: “Probably some of the best examples are when we look at brain development. So, there are multiple publications in literature, which show you can take skin fiber blasts from adults, you can actually purchase these skin fiber blasts from biorepositories such as Coriell, and you can make these IPS derived four-brain organoids that you can use to study Miller-Decker syndrome. There’s actually key

publications that have shown that you can take these cells and you can actually make cerebral organoids and you can look specifically at astrocytes and they have shown these astrocytes actually have functional pathways similar to the adult human cortex. We have other examples such as [indiscernible] from 2016 in which they've generated many of these organoids to recapitulate many of the features of the pre-fetal human brain. There is other examples, so for example [indiscernible] from 2017 in which they've taken these brain organoids and actually been able to graft them into a mouse and actually look at functional neuronal networks of vascularization such as blood vessels. So, these are all critical studies. Another example, Levine was able to take these, well actually it was Jang Et. Al. were able to actually take these and actually research human developmental brain by recapitulating the medial ganglion organoids and cortical organoids. So there are multiple, multiple examples, I could keep talking, and this is just about brain development. We're not even talking about retinal development, Kidney development, and these are key studies that can be don't in multiple areas on development in the fetus."

Click here to view Grothman's full remarks (beginning at 1:39:24).

Additional Information

PURPOSE:

· To evaluate the ethical considerations of fetal tissue research and explore alternative research methods.

· To discuss the recent steps taken by the Administration to expand efforts in developing and implementing the use of alternatives.

BACKGROUND:

· Since the 1920s, scientists have used cells from fetal tissue in their research. This year, the National Institutes of Health is estimated to provide approximately $100 million in funding for research grants that involve the use of fetal tissue.

· In September, the Department of Health and Human Services (HHS) canceled its contract with a fetal tissue procurement company, citing concerns the company was not meeting applicable fetal tissue regulations. HHS subsequently initiated an audit regarding their human fetal tissue acquisitions and is continuing its review of

“whether adequate alternatives exist to the use of human fetal tissue in HHS funded research.”

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U.S. Rep. Glenn Grothman is serving his second term representing Wisconsin’s 6th Congressional District in the U.S. House of Representatives.

Link to the release:
https://grothman.house.gov/news/documentsingle.aspx?DocumentID=873