Embryonic Stem Cell Research: Hope for a Cure for Diabetes

The American Diabetes Association is committed to finding a cure for diabetes, as well as to finding better treatment options for individuals with diabetes until a cure is available. Embryonic stem cell research holds much promise in the search for better treatment and for a cure for the nearly 21 million Americans with diabetes. The American Diabetes Association supports the use of embryonic stem cell research in biomedical research, provided such use is consistent with federal guidelines relating to the bioethics for their use. ***The Association strongly supports H.R. 3/S. 5, the "Stem Cell Research Enhancement Act of 2007," which would expand federal funding for embryonic stem cell research, while keeping President Bush's ethical framework from his 2001 policy.*** The identical bill passed the U.S. House of Representatives and the U.S. Senate with bipartisan support during the 109th Congress, but was vetoed by President Bush.

Passage of the Stem Cell Research Enhancement Act Would Lead to Progress for Diabetes Research

- In August 2001, President Bush announced that federal funding for embryonic stem cell research would be limited to the 78 stem cell lines available for research at that particular point in time.

- As opposed to adult stem cell research which has had several decades to progress, human embryonic stem cell research really only began in the late 1990s. The first step in research is traditionally basic research done at the National Institutes of Health (NIH). Unfortunately, NIH's work in this area has been hindered due to the restrictions from the 2001 policy.

- The unfortunate reality is that now very few stem cell lines are available to researchers in the United States. In addition, all of the available lines are contaminated with mouse feeder cells, making it impossible for these lines to be used to create therapies for humans. Since 2001, we have discovered better methods of deriving stem cell lines so that they do not face the same contamination issues.

- A significant expansion in the number of available lines is necessary in order to fully reap the medical rewards of stem cell research.

- Stem cell research allows scientists to better explore how to control and direct stem cells so they can grow into other cells, such as insulin-producing beta cells. Creating new beta cells could mean a cure for type 1 diabetes as they would serve as a replenish able source of cells for islet cell transplantation. They could also provide a powerful tool for controlling type 2 diabetes.

- While embryonic stem cell research has only taken place in the last decade, researchers have made several advances to demonstrate its potential for scientific progress, and they now understand pieces of the framework for how this research could benefit diabetes. Already, many of the genes involved in pancreatic development have been identified, and recent discoveries have allowed scientists to overcome the difficult task of getting stem cells to produce the necessary proteins - in the correct sequence - that will allow them to become insulin-producing islet cells.

- The Association strongly believes that NIH research on the possibilities of stem cell research must be allowed to progress. By lifting existing restrictions and supporting research that uses human embryonic stem cells, H.R. 3/S. 5 would accelerate stem cell research for diabetes.

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"The Stem Cell Research Enhancement Act" Strikes an Ethical Balance

- H.R. 3/S. 5 places clear and strong ethical requirements on what stem cells could be used for research. The bill follows the ethical guidelines President Bush put in place by requiring that federal funds could only be used if 1) the stem cells came from excess embryos that had been created for infertility treatment purposes and 2) the embryos would have otherwise been destroyed. In other words, couples would have to consider all other options - including adoption – before making the decision that they would prefer to donate their excess embryos to research instead of destroying them.

- "The Stem Cell Research Enhancement Act" would expand the current federal policy on embryonic stem cell research by allowing federal funding for stem cell lines derived after August 2001.

- The bill requires informed consent and prohibits financial incentives to donors.

Making a Difference: What Congress Can Do

- The current state of science around human embryonic stem cell research is at the very early stages in this country, in large part because of the current restrictions on federal funding. Because of the benefit that stem cell research promises to hold for millions of Americans, the American Diabetes Association believes that such research should be allowed to accelerate and progress within the strict ethical guidelines put forward by H.R. 3/S. 5.

- When the Senate considers H.R. 3 (S. 5 in the Senate), other bills and amendments may also be considered at the same time. While the American Diabetes Association supports any and all ethical attempts to move forward viable research for a cure, science tells us that the methods promoted in H.R. 3/S. 5 hold the best promise for the 20.8 million Americans with diabetes. Further, many of these bills would have little or no real impact on the search for a cure and better treatments for Americans with diabetes, and some of the amendments could even restrict research. **A vote for a clean version of H.R. 3/S. 5, and this bill alone, will provide for the most promising stem cell research.**

The American Diabetes Association calls on Members of Congress to help advance the search for a cure for diabetes by supporting H.R. 3/S. 5, the Stem Cell Research Enhancement Act.

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The Association gratefully accepts gifts through your will.

The Mission of the American Diabetes Association is to prevent and cure diabetes and to improve the lives of all people affected by diabetes.