Washington State
House of Representatives
Office of Program Research

BILL ANALYSIS

Health Care Committee

HJM 4030

Brief Description: Encouraging stem cell research.

Sponsors: Representatives Schual-Berke, Wood, Ruderman, Chase, Sullivan, Murray, McIntire, Hunt, Hankins, Cody, Moeller, Kagi and Sommers.

Brief Summary of Bill

- Requests the representatives of the federal government to increase funding for human embryonic stem cell and germ cell research.

Hearing Date: 1/21/04

Staff: Chris Blake (786-7392).

Background:

The Biology of Stem Cells

Stem cells can be distinguished from other types of cells in three ways. First, they are capable of dividing and replicating (renewing) themselves indefinitely. Second, stem cells are unspecialized. This means that they do not perform any specific function, as do heart muscle cells, red blood cells, or nerve cells. Lastly, stem cells can create specialized cells. While they do not perform a particular function, they can give rise to specialized cells while remaining unspecialized themselves.

Stem cells can be classified as embryonic stem cells, embryonic germ cells, and adult stem cells according to the stage of development of the organism. The key difference between embryonic stem cells and adult stem cells is that an embryonic stem cell can become any type of cell in the body, while adult stem cells can only vary between the different types of cells within the organ in which they are found. Recent research, however, suggests that adult bone marrow stem cells may have similar characteristics. Another significant difference is that embryonic stem cell replication can generate large numbers of new cells, while adult stem cells do not replicate as easily (under current technology).

Scientists obtain human embryonic stem cells from embryos that are not used after in vitro fertilization treatment. In 1998 scientists first isolated and cultured human embryonic stem cells, a process that destroys the embryo. Current research using stem cells pertains to diabetes, Parkinson's disease, heart disease, cancer, and spinal cord injury.

Federal and Policy on Stem Cells

In August 2001, the President announced that federal funding of embryonic stem cell research would be permitted for research on the embryonic stem cell lines in existence at that time, but the funding would not be available for any subsequently created embryonic stem cell lines. The limitation does not apply to privately funded research. At the same time, the President announced the creation of the President's Council on Bioethics to study the ethical and moral implications of developments in biomedical and behavioral science and technology.

Summary of Bill:

The Legislature requests that federal funding be made available to support research involving human embryonic stem cells and human embryonic germ cells, including somatic cell nuclear transplantation, upon full consideration of the ethical and medical implications. This request is addressed to President Bush, the United States Senate and House of Representatives, the Secretary of the United States Department of Health and Human Services, and the Director of the National Institutes of Health.

Appropriation: None.

Fiscal Note: Not requested.