



**Testimony of the
Biotechnology Industry Organization (BIO)
Before the Texas House of Representatives State Affairs Committee**

**Regarding House Bill 1929
The Use of Human Cells and Tissue
April 11, 2005**

Thank you for the opportunity to present testimony today in support of House Bill 1929, regarding The Use of Human Cells and Tissue.

BIO represents more than 1,100 biotechnology companies, academic institutions, state biotechnology centers and related organizations in all 50 U.S. states and 33 other nations. BIO members are involved in the research and development of health care, agriculture, industrial and environmental biotechnology products. In Texas, we work closely with the Texas Healthcare and Bioscience Institute (THBI) to represent the more than 475 life science companies working in Texas to develop cures for patients suffering from diseases such as cancer, diabetes, Parkinson's and Alzheimer's disease as well as many others.

Medical research has taken quantum leaps in the past decade. Scientists are identifying and developing innovative cures to deadly and debilitating diseases. According to the National Institutes of Health and the National Academies of Science, human embryonic stem (HES) cells have shown incredible promise toward developing breakthrough treatments for a variety of intractable diseases including various cancers, kidney disease, diabetes, hepatitis, multiple sclerosis, Parkinson's Disease, Alzheimer's Disease and many other diseases. In fact, recent

developments have demonstrated that human embryonic stem cells can be used to create insulin-producing cells that might help cure type-1 diabetes.

House Bill 1929 will expressly protect this very promising area of research. In addition, the bill also protects the right of scientists to use somatic cell nuclear transfer technology for the derivation of HES cells. This innovative process may some day improve treatments, minimizing the risk of rejection of new cells and tissue because it uses an individual's own cells to treat specific diseases.

BIO is committed to the socially responsible use of biotechnology to save or improve lives. We recognize that there are moral and ethical concerns surrounding human embryonic research. This bill strikes an appropriate balance by prohibiting reproductive human cloning while encouraging potentially life saving research to advance under carefully constructed regulatory oversight. House Bill 1929 will ensure that researchers in Texas can employ this valuable technology, and that patients in Texas and possibly around the world might one day benefit from treatments or cures developed using stem cell technologies.

Stem cells are unique in that they can become any cell in the body. Working with these cells, scientists can harness “undifferentiated” human stem cells and direct them to become a variety of specialized cells. Once enough specialized cells have been developed they can then be used to repair spinal cord injuries; regenerate damaged brain cells for people suffering from Parkinson’s or Alzheimer’s disease; regenerate muscle or organ tissue as well as skin cells to treat burn victims. The benefit of this type of therapeutic cloning may someday allow doctors to treat patients suffering from these maladies with cells that are the genetic duplicates of the patients’ own damaged cells. This could significantly reduce rejection issues common with donor cells or organ transplants.

We are not alone in our support for preserving all forms of stem cell research. The National Academy of Sciences (NAS) in a recent report concluded:

“The scientific and medical considerations that justify a ban on human reproductive cloning at this time are not applicable to nuclear transplantation to produce stem cells. Because of the considerable potential for developing new medical therapies to treat life-threatening diseases and advancing biomedical knowledge, the panel supported the conclusion of a previous National Academies’ report—*Stem Cells and the Future of Regenerative Medicine*—that recommends

that biomedical research using nuclear transplantation to produce stem cells be permitted.”

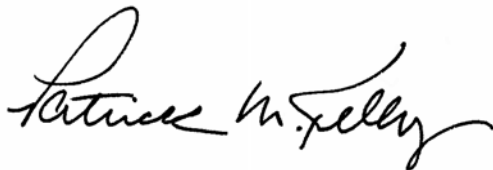
In addition, numerous public officials support the promise of stem cell research. Former First Lady Nancy Reagan, former Presidents Gerald Ford and Jimmy Carter, U.S. Senators Orrin Hatch and Edward Kennedy, as well as former Senator and ordained minister John Danforth all support the potential of embryonic stem cell research to develop cures for the diseases afflicting millions of people worldwide.

Texas is widely recognized as a center excellence for life science research and development. However, there are states that are aggressively pursuing legislation to attract biotechnology companies. California, the state with the largest biotechnology industry presence in the country, recognizes the promise of this technology. The state became the first in the nation to create a safe harbor for all forms of stem cell research, and with the passage for Proposition 71, the state will allocate \$3 billion to stem cell research over the next 10 years. Nearly a dozen states are now considering legislation to either create safe harbors and/or allocate funding for stem cell research. The passage of House Bill 1929 will further cement the state's reputation as a preeminent leader in biomedicine and biotechnology.

Texas has always been a staunch supporter of the advancement of biomedical research and promoting industry growth. Promoting the very promising area of stem cell research is imperative if the state is to continue to hold its competitive advantage over other states in the country. We strongly urge members of the committee to support House Bill 1929.

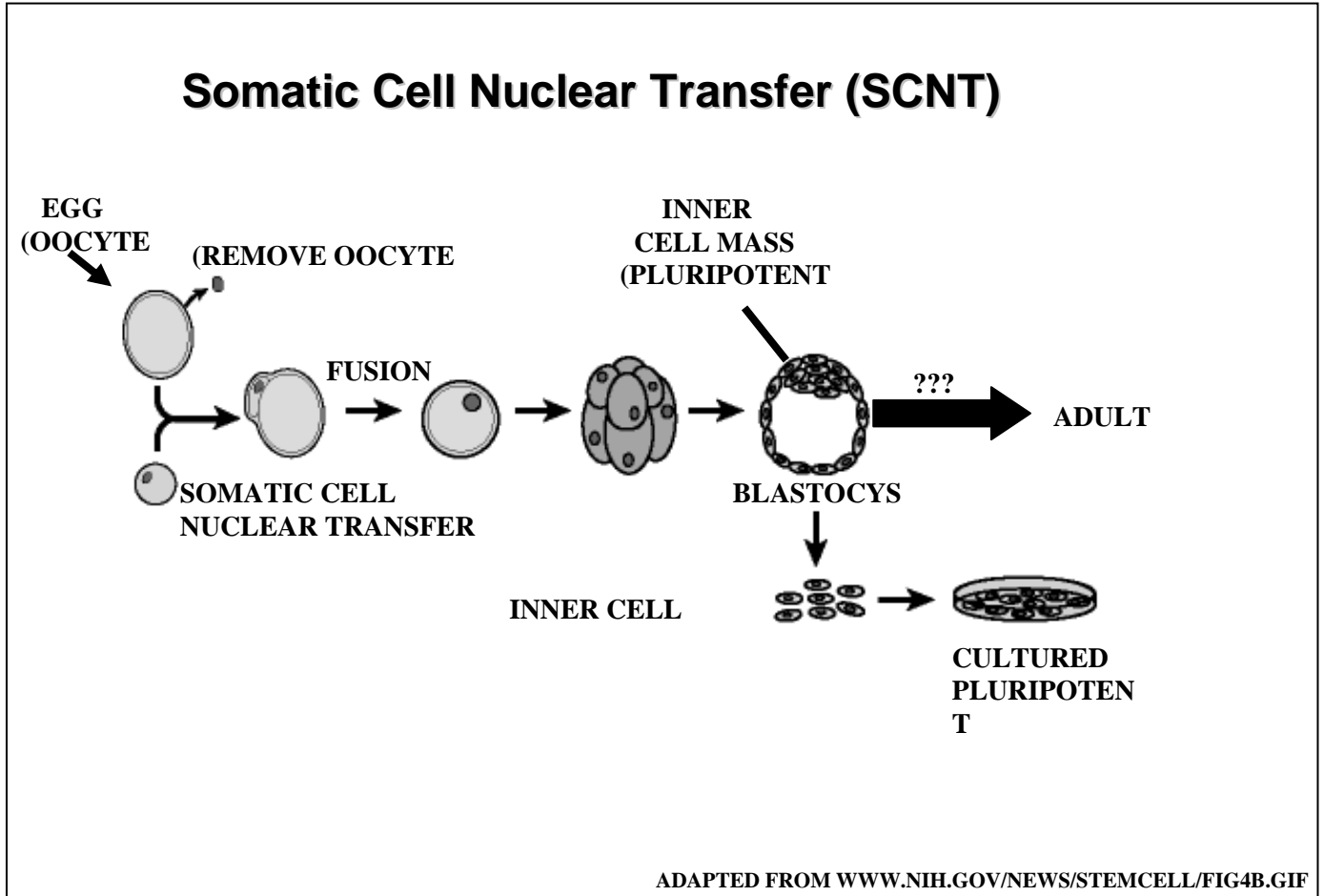
Again, thank you for the opportunity to submit testimony. Please feel free to contact me if you have any questions or need additional information.

Respectfully Submitted,

A handwritten signature in cursive script, reading "Patricia M. Kelly". The signature is written in black ink and is positioned below the typed name "Patricia M. Kelly".

Patrick M. Kelly
Vice President, State Government Relations
Biotechnology Industry Organization

Diagram #1



ADAPTED FROM WWW.NIH.GOV/NEWS/STEMCELL/FIG4B.GIF

Diagram #2

