Five Nobel laureates from Texas make the case that...

Therapeutic cloning ban would hurt research

The Texas Legislature is considering a bill, House Bill 1175, that is meant to address the public’s worries about human cloning. Unfortunately, although the measure is well intentioned, it could devastate medical research in Texas.

As five Nobel laureates who live and work in Texas, we know firsthand that medical research contributes hundreds of millions of dollars to the state’s economy and has produced hundreds of lifesaving treatments.

The problem with the anti-cloning bill is that it is far too broad. It could threaten the progress being made in fighting some of the most debilitating diseases known to humankind, closing the door on hope for 100 million Americans.

Two committees of the National Academy of Sciences, as well as noted national and international organizations, have concluded that reproductive cloning — creating a baby who is genetically identical to a parent — would constitute unwarranted experimentation on human subjects.

For that reason, reproductive cloning should be prohibited, and criminal and civil penalties should be imposed on those who would implant the product of nuclear transplantation into a woman’s uterus.

But the bill before the Legislature doesn’t just ban reproductive cloning; it also targets therapeutic cloning (or somatic cell nuclear transfer technology, as scientists call it).

There are fundamental differences between therapeutic cloning and reproductive cloning.

Therapeutic cloning involves removing the nucleus of an egg cell, replacing it with the material from the nucleus of a heart, nerve, skin or other non-germ cell, then stimulating that cell to begin dividing.

The tiny batch of cells never leaves the lab or is transplanted into a womb. No sperm is used in the process. Instead, the unfertilized egg cells are stored in a lab to produce the stem cells that may be able to treat some of the most dire diseases that science now faces.

For example, it may be possible to use therapeutic cloning to produce patient-specific embryonic stem cells that could overcome the rejection normally associated with organ and tissue transplantation.

Therapeutic cloning also may help us understand how inherited predispositions lead to a variety of cancers and neurological diseases such as Parkinson’s and Alzheimer’s diseases.

And therapeutic cloning may bring new hope to people suffering from cancer, diabetes, ALS, spinal cord injury and many other now-incurable conditions.

Yet the anti-cloning bill in the Legislature would ban such vital research, punishing researchers with prison terms up to 10 years and civil penalties up to $10 million.

While patients and their families would be the most important victims, Texas’ economy and reputation would suffer as well.

Texas has become a national leader in biomedical research, with world-class university research centers and a strong biotechnology industry. Together, they contribute more than $1 billion year to our economy and employ tens of thousands of people.

The prospect of prison sentences or huge fines surely would discourage the innovation and risk-taking that are vital to cutting-edge research. Texas also would face a biomedical brain drain, as some of its best researchers go to other states or foreign countries where therapeutic cloning research is flowering.

There is a much better way to deal with concerns about cloning. Twenty-five years ago, recombinant DNA technology was as controversial as somatic cell nuclear transfer technology is today. There were calls for an outright ban. But in the end, political leaders worked with scientists to develop a self-regulatory system that protected against abuses while allowing society to benefit from the new technology.

In Washington, Sen. Orrin Hatch, a pro-life Republican from Utah, and others have introduced a bill that makes reproductive cloning illegal with strong criminal and civil penalties for violators. At the same time, the Hatch measure allows therapeutic cloning to go forward with rigorous ethical and scientific controls. The Hatch bill is a much better solution.

As scientists, we have seen the very real differences research can make in the quality of people’s lives. It would be a shame if our state legislators stopped medical progress and denied hope to those who need it most.