

November 2003

Section I

A nation, like its individual citizens, has a memory and a national will. It too can be judged by the things and ideas it truly treasures according to the time, resources and energy invested in them. Some people claim that a nation's moral standing can be determined by how it treats its most vulnerable citizens, how it views human life itself and how it respects, honours and protects that life.

The Canadians who fought in the world wars did themselves proud by battling a totalitarian system that had little regard for large segments of humanity. Do we continue to cherish their sacrifices? Do we honour them when we adopt the same morally bankrupt utilitarian philosophy condemned by the Nuremberg Code?

Can Canadians resist the siren song of secular humanism and its utilitarian vision of society as debated in Parliament and as embraced in an important piece of legislation which failed to become law only because Parliament was prorogued on November 12?

This edition of *The Interim Plus* looks at the continuing debate over human life. The swirl of arguments surrounding Bill C-13 has been instructive. The material in this supplement may be useful to teachers planning lessons in the following courses: world issues; Canadian politics; philosophy; religious studies; biology; family studies; history; and law. The material can serve as learning resources. The learning objectives can be diverse but certainly can include those of having students:

- think clearly
- think critically
- exercise research skills
- communicate clearly
- craft coherent arguments
- interpret data
- judge events
- learn to use ethical arguments
- appreciate the complexity of public issues
- respect human life even in its earliest, most fragile state

The material has been organized into five sections:

1. Framing the debate
2. An overview and context of the issues involved in Bill C-13
3. Excerpts from Hansard on a selective number of MPs' speeches delivered on the topic
4. Alternatives to ESCR
5. Christian Churches teaching on the subject and the Nuremberg Code

Framing the Debate: What are stem cells and how are they obtained?

Every human body contains stem cells. These cells develop into 200 or more different kinds of cells that make up the organs of the human body. Scientists theorize that they can cultivate these cells and program them for specific therapeutic purposes, such as growing new brain, heart, or kidney tissue to repair damaged tissue.

Stem cells develop very quickly and very early in the human embryo after fertilization, but they are also found in the placenta and the umbilical cord, as well as in the adult brain, bone marrow, blood, skeletal muscle, and skin.

Some scientists want to do research on stem cells gathered from embryos. These embryonic cells are called master cells. As younger cells than those taken from adults, they are believed by some to be easier to reproduce and manipulate in the laboratory.

Scientists obtain embryonic stem cells from human embryos. A human embryo is the earliest stage of human life.



To obtain the embryonic stem cells, the human embryo must be killed. The cells are then cultivated in the laboratory, replicating over and over again. Currently, – in the U.S. there are an estimated 60 active stem cell lines, each traced back to embryos that were destroyed in order to obtain the original cells.

Human embryos be created in a lab using the same technology to fertilize a human egg with a human sperm that is used in in vitro fertilization.

Because many thousands of human embryos created for in vitro fertilization have never been implanted, some say they could be “donated” for stem cell experiments.

Others say that these embryos could be cloned and then

destroyed for their cells. One human embryo would be “copied” over and over again and its cells “harvested” for experiments.

In each case a human embryo - a living human being in its earliest stage of formation - would be intentionally destroyed for the sake of scientific experimentation.

What the Church Teaches: Stem Cell Research, A Catholic Perspective, published by Our Sunday Visitor. Also available on www.whatthechurchteaches.com

So why is embryonic stem cell research (ESCR) evil if it might accomplish something good, like healing diseases? Why not pass laws which regulate the experimentation and research but permit them to take place for the greater good of humanity? Sounds good, but isn't this kind of argument just like that of the Nazis? How can the end justify the evil means?

Section II

Bill C-13 The Assisted Human Reproduction Act

For ten years Canadian parliamentarians have struggled trying to pass comprehensive legislation that would regulate all new technologies and methods surrounding the reproduction of human life. In early November it appeared that the federal government was about to pass a piece of legislation that would address and regulate all aspects of the new reproductive technologies.

However, a closer look at some of Bill C-13's provisions reveal that the bill is fundamentally flawed, and ought not to be passed in its present form. (See excerpts of the speeches of some MPs below)

Unfortunately, Bill C-13 as presently constituted, would permit scientific research which deliberately results in the death of human embryos (human beings at an early stage of their natural development). The Bill would allow research on embryos “left over” from infertility treatments. This means that one specific class of human beings, because of their size, invisibility and inability to express objections, would be slated for exploitation and destruction in the service of other people's benefit.

Some scientists claim that **embryonic stem cell** research holds much promise for the development of cures for many debilitating diseases like Parkinson's, Alzheimer's, diabetes, and spinal cord injuries. In fact, there has not been one shred of evidence to support their unbridled enthusiasm. There has not been even one breakthrough in the application of embryonic stem cells in the curing of any disease.

But, there has been success in **adult stem cell** research and its application in the medical field. Some scientists ignore, downplay, deny or dismiss the successes in the adult stem cell field despite genuine evidence of success.

Bill C-13, like many pieces of legislation, has its sponsors and detractors. Many groups have lobbied the MPs on the Bill. Newspapers and other media have been quick to point

out the opposition to the bill of the Canadian Conference of Catholic Bishops, the Evangelical Fellowship of Canada, Campaign Life Coalition, Life Canada, Focus on the Family and other interested parties. But hardly any mention is ever made of the corporate sponsors of the legislation.

In fact, corporate groups want to go further than merely lobbying parliament. They are anxious to establish in classrooms across Canada their vision of ethical scientific research and the potential benefits to those suffering from diseases. They are sponsoring, together with other entities, curriculum kits as learning resources for high schools.

Hilary White of Campaign Life Coalition analyzed the curriculum kit put out by the University of Toronto and partially sponsored by large corporate interests. In her analysis White points out the presentations have serious bias and considerable imbalance, either by the selective omission of material, shoddy documentation, or other deficiencies.

According to White, the groups listed as sponsors of the U of T curriculum package are themselves “stakeholders” in the issue of embryonic stem cell research and cloning. They appear to have a vested interest in the passage of Bill C-13. This Bill would allow these groups to receive federal funding for research that would prove extremely lucrative for their funding corporations.

Furthermore, according to White, the Joint Centre for Bioethics at the University of Toronto (the originator of the U of T kit) is also funded by the CIHR (Canadian Institute of Health Research) and would materially benefit from the passage of Bill C-13.

The many groups which oppose Bill C-13 have included Protestant, Jewish, Muslim, Roman Catholic and other faith communities but their views were not properly represented in the kit.

As well, it is important to remember that scientists are not a monolithic group and many of those who do research with stem cells have grave ethical misgivings about the use of embryos.

Questions

1. Why has it taken 10+ years to introduce legislation to regulate new reproductive technologies?
2. What have been some of the obstacles?
3. How would Bill C-13 benefit scientific research? How would it benefit the pharmaceutical companies?
4. Why do so many of the scientists insist on pursuing embryonic stem cell research despite the apparent total lack of success in their application to curing diseases? (see the material in the next article: The Promise of Adult Stem Cells)
5. What is the difference between embryonic stem cell research and adult stem cell research? Why is the latter ethically without problems and why is the former fraught with ethical issues?
6. Is it a good idea for a university to produce an educational kit for high schools? Does it matter at all as to what

groups sponsor the educational kit?

7. Research the funding groups behind the University's kit dealing with the ethics and formulation of proper legislation re stem cell research.

8. Why does the media underplay the connection between drug companies and the passage of Bill C-13 in the form which would permit destructive ESCR? (embryonic stem cell research)

Section III

Parliament, as stated, has been dealing with the issue of stem cell research and human cloning for over ten years as part of their efforts to come to grips with the challenges posed by new reproductive technologies. The Hansard excerpts which follow represent a portion of the many critical arguments raised by informed MPs who want a good bill, one which would protect all human life against the abuses of destructive research and experimentation. The arguments range from the philosophical to the political, social, ethical, moral and scientific. The speeches give a flavour of the passionate nature of the debate among elected officials. The arguments are eloquently presented. It is highly recommended that classes be encouraged to view and listen to the speeches on the Parliamentary channel. Since Parliament was prorogued there may be opportunities to hear the Parliamentarians tackle this Bill once again. [7/2/parlbus/chambus/house/debates/088_2003-04-10/han088_1135-E.htm](http://www.parl.gc.ca/parlbus/chambus/house/debates/088_2003-04-10/han088_1135-E.htm)

to read the speeches verbatim in an edited version of Hansard. A sample of the speeches follow.

Parliamentarians Have their Say



Elsie Wayne M.P.

Mrs. Elsie Wayne (Saint John, PC): *I am not opposed to adult stem cell research, I am opposed to embryonic stem cell research. The number one issue is to put the child first, the parents second, research third, and it must be in that order. ...There is no question that we are in a high tech world and that we need lots of research. However adult stem cell research is the way to go. No one is hurt with that. Researchers can do that. Why do*

they want to do research on embryonic stem cells? Will somebody in the House tell us why?

Mr. Paul Szabo: *Money.*

Mrs. Elsie Wayne: *Yes, that is right. That is exactly what it is. There will be no negative debate on adult stem cell research, but there is a negative debate on embryonic stem cell research...*



Paul Szabo M.P.

Mr. Paul Szabo (Mississauga South, Lib.): *I have a comment. The House may want to know that it was reported in this week's press, on Monday I believe it was, that the U.K., which has been doing this research for over the last 10 years, is reported to have used 40,000 human embryos for embryonic stem cell research and does not have one reported case of success. I think that tells us what the dimensions of the issue are.*

Notwithstanding that a physician rose in here and said no researcher ever came before us and said we should not do that, well, of course: the researchers all want something. Dr. François Pothier, in a round table before the UNESCO Friendship Group of Parliamentarians, said that the reason adult or non-embryonic stem cells are not as attractive is, in his words, that there is no money in adult stem cell research.

On June 21, 2002, it was reported in the research of Dr. Catherine Verfaillie that it had been found that stem cells from human bone marrow could be morphed to become virtually every cell in the human body...

Questions

1. What arguments does Elsie Wayne make against ESCR?
2. What important question did she raise?
3. What telling point was made by Paul Szabo?
4. If 40,000 human embryos were used by British scientists for embryonic stem cell research and they do not have one reported case of success, what does that suggest about the real motives behind the demand for permissive legislation in this field?



John Cummins M.P.

Mr. John Cummins (Delta—South Richmond, Canadian Alliance): *Mr. Speaker, the former president of the Czech Republic, Václav Havel, in a now famous speech at Stanford University in September 1994, "Forgetting We Are Not God," reminded his listeners that the greatest human folly occurred in the 20th century under those leaders in governments who had failed to understand "how unbelievably shortsighted a human being can be who has forgotten that he is not God".*

We are engaged here today in a debate where it is well to remind ourselves of the folly of forgetting that we are not God, that when moral and ethical absolutes are lacking, great evil can be done, and if experience is our guide, almost surely will be done.

A fundamental failure in Bill C-13 is that it is ethically and morally neutral as to a preference between embryonic stem cell research and adult stem cell research. The bill does not, nor does the government, commit itself to substantial new funding for adult stem cell research. The bill and the government have tragically failed Canadians on this point.

First and foremost this is an ethical and moral debate because we are talking about human dignity. Much is at stake. We are shaping the future of what it means to be human in Canada. We cannot blindly follow the path of expedience, tailoring our understanding of human dignity to what is scientifically possible.

It is important to remember that scientific understanding does not render other forms of human understanding obsolete or irrelevant. The scientific understanding that the human body contains cells which in turn contain DNA does not trump a parent's understanding of a particular human as their child or a moral and ethical understanding of that child as a member of the human race.

Having a scientific understanding of the human body may be required to evaluate a proposed experimental medical treatment, for example, but it does not reduce a child to a collection of chemicals and cells.

In practice, any scientific understanding a parent may have is likely to make only a very minor contribution to their overall understanding of their child. Importantly, scientific information does not relieve even the most scientific parents of the obligation to make decisions regarding their children in the most comprehensive and just manner possible, as a scientist, as a parent and as a citizen, under the law and under God.

...Similarly, evaluating public policy on genetic engineering, embryonic stem cells or human cloning does not require a detailed understanding of the underlying technology, but rather a willingness to weigh the issues raised by this technology in a broader social context without merely deferring to the judgment of scientists.

On moral and ethical issues, scientists are no more prepared to provide an intelligent answer than anyone else. In moral and ethical debates, the professional competence of the scientist is limited to a presentation of the facts.

The fundamental ethical objection is that the creation or use of embryos for research is wrong and their destruction indefensible. This implies two things: first, that embryos have a moral status; and second, that in a moral calculation we must appreciate that we violate the protected interest of embryos by deploying them for research or destroying them. Of these two points the first is critical, for, if this does not hold, the objection does not get to first base and it can only apply in an attenuated form.

The human embryo must be directly respected. It matters not that it cannot experience distress or make its own choices. It is not like a rock or a stone. It is a living thing and a member of the human species. As such, it must be protected by the overarching value of respect for human dignity. It has moral and ethical status and to treat it like a rock or a stone is to compromise human dignity.

Why is a debate about embryonic stem cell research so fundamentally important? First, fundamentally the debate over embryonic stem cell research is about what a human being is, what rights a person has and what respect society owes that person. When people cannot agree on so fundamental an issue, terrible things can happen.

Second, this is an aging society about to confront many uncomfortable ethical dilemmas about vulnerable and unwanted people. What Parliament decides now about embryos sets a precedent for all subsequent legislation. It writes a guidebook for future debates about health and health spending.

The role of a scientist is to give facts. From the ethical and moral perspective scientists have done a marvellous job in giving us the facts, indeed all the facts we need to make an informed ethical judgment: embryos have a fully human genetic tool kit; given the right conditions an embryo will grow into a baby; and embryos are vulnerable and cannot survive without a favourable environment.

If the embryo is a person, it has human rights, no matter how big it is or what it looks like. No person can be experimented on against his or her will. No person can be dissected for profit. This is a fundamental principle of a democratic society.

Regrettably, much of the debate on this issue has taken place on emotional grounds, pitting the hope of curing heart-rending medical conditions against the deeply held moral and ethical convictions of many Canadians. Such arguments frequently ignore or mischaracterize the facts. To arrive at an informed opinion on human embryonic stem cell research, it is important to have a clear understanding of precisely what embryonic stem cells are, whether embryonic stem cells are likely to be useful for medical treatments and whether there are a viable alternatives to the use of embryonic stem cells in scientific research.

There is no scientific consensus about the need for human embryo experimentation. The letter from a group of leading medical researchers to the Australian senate committee studying a bill somewhat similar to Bill C-13 is instructive. It reads:

We the undersigned medical researchers submit the following points for consideration of our elected representatives:

1. While accepting that the debate about destruction of human embryos for research purposes is primarily an ethical one, it is relevant that from a purely scientific point of view, arguments claiming the urgent need for embryonic stem cell research are not compelling.

2. Undue expectations have been created in the community, particularly in those with various medical afflictions, as to the imminence and likely scope of embryonic stem cell therapy.

3. The community has not been properly informed of the scientific difficulties involved in developing embryonic stem cell therapies, which include major obstacles of immune rejection and cancer formation.

4. Research using adult stem cells, by contrast, avoids issues of rejection and cancer formation, and has the clear advantage of being able to use the patient's own cells to repair any deficits.

5. Such research on stem cells derived from adult and

placental tissues, which has seen great advances in the last three years is quite compelling in its clinical promise, and does not involve the destruction of nascent human life.

6. In proper medical research, “proof of concept” must first be established in animal models before moving to human subjects. Such proof using embryonic stem cells has not been established in any conditions such as Alzheimer’s, MS, diabetes and Parkinson’s which are so often part of public discussion.

7. Therefore it is scientifically premature and improper to move human experimentation at this early stage of research.

8. Consistent with proper research principles, we advise that there be a moratorium on the destructive use of human embryos until, if ever, animal models are able to adequately demonstrate “proof of concept”, and human safety issues have been adequately addressed.

Questions

1. According to John Cummins why is it “folly forgetting that we are not God”?
2. Is science to be trusted in these moral debates? Of what use can science be in such discussions?
3. Why is the debate over ESCR crucial according to Cummins? What does it portend?
4. In Cummins’ mind what is the fundamental question to be answered?
5. What evidence does Cummins cite to show that there is no consensus among scientists in favour of ESCR?
6. Summarize the main points in the Australian medical researchers’ letter to the Australian Senate.

There are at least three compelling scientific arguments against the use of embryonic stem cells as a treatment for disease and injury.

First and foremost, there are profound immunological issues associated with putting cells derived from one human being into the body of another. The same compromises and complications associated with organ transplant hold true for embryonic stem cells. The proposed solutions to the problem of immune rejection are either scientifically dubious, socially unacceptable or both.

The second argument against the use of embryonic stem cells is based on what we know about embryology. Failing to replicate the full range of normal developmental signals is likely to have disastrous consequences. Providing some but not all the factors required for embryonic stem cell differentiation could readily generate cells that appear to be normal but in fact are quite abnormal. Transplanting incompletely differentiated cells runs the risk of introducing cells with abnormal properties into patients. This is of particular concern in light of the enormous tumour forming potential of embryonic stem cells.

The final argument against using human embryonic

stem cells for research is based on sound scientific practice. We simply do not have sufficient evidence from animal studies to warrant a move to human experimentation.

While there is considerable debate over the ethical, moral and legal status of early human embryos, this debate in no way constitutes the justification to step outside the normative practice of science and medicine that requires convincing and reproducible evidence from animal models prior to initiating experiments on humans. While the potential promise of embryonic stem cell research has been widely touted, the data supporting that promise is largely non-existent.

To date there is no evidence, none, that cells generated from embryonic stem cells can be safely transplanted into adult animals to restore the function of damaged or diseased adult tissues. The level of scientific rigour that is normally applied and legally required under the Canadian Food and Drugs Act and its regulations in the development of potential medical treatments would have to be entirely ignored for experiments with human embryos to proceed.

Despite the serious limitations to the potential usefulness of embryonic stem cells, the argument in favour of this research would be considerably stronger if there were no viable alternatives. This, however, is not the case.

In the last few years, tremendous progress has been made in the field of adult stem cell research. Adult stem cells can be recovered by tissue biopsy from patients, grown in culture and induced to differentiate into a wide range of mature cell types.

The scientific, ethical, moral and, some would say, political advantages of using adult stem cells instead of embryonic ones are significant. Deriving cells from an adult patient’s own tissues entirely circumvents the problem of immune rejection. Therapeutic use of adult stem cells raise very few ethical and moral issues.

In light of the compelling advantages of adult stem cells, what is the argument against their use? The first concern is a practical one: adult stem cells are more difficult than embryonic ones to grow in culture. There is a concern that scientists do not yet know how many mature cell types can be generated from a single adult stem cell population.

In theory, embryonic stem cells appear to be a more attractive option because they are clearly capable of generating all the tissues of the human body. In practice, however, it is extraordinarily difficult to get stem cells of any age to do what we want them to do in culture.

There are two important counter arguments to the assertion that the therapeutic potential of adult stem cells is less than that of embryonic stem cells because adult cells are restricted and therefore unable to generate the full range of mature cell types.

First, it is not clear at this point whether adult stem cells are more restricted than their embryonic counterparts. It is important to bear in mind that the field of adult stem cell research is not nearly as advanced as the field for

embryonic stem cell research. With few exceptions, adult stem cell research has demonstrated equal or greater promise than embryonic stem cell research at a comparable stage of investigation.

Further research may very well prove that it is just as easy to teach an old dog new tricks as it is to train a wilful and unpredictable puppy. This would not eliminate the very real problems associated with teaching any dog to do anything useful, but it would remove the justification for age discrimination in the realm of stem cells.

The second counter-argument is even more fundamental. Even if adult stem cells are unable to generate the full spectrum of cell types found in the body, this very fact may turn out to be a strong scientific and medical advantage. If adult stem cells prove to have restricted rather than unlimited potential, this would indicate that adult stem cells have proceeded at least part way toward their final state, thereby reducing the number of steps scientists are required to replicate in culture. The fact that adult stem cell development has been directed by nature rather than by scientists should greatly increase our confidence in the normalcy of the cells being generated.

There is clearly much work that needs to be done before stem cells of any age can be easily used as medical treatment. It seems only practical to put our resources into the approach that is most likely to be successful in the long run.

In light of the serious problems associated with embryonic stem cells and the relatively unlimited promise of adult stem cells, there is no compelling scientific argument for taxpayer supported research on human embryos.

Embryonic stem cell research goes to the heart of how we view human life, both at its earliest and its final stages. As in the case for all matters of life and death, this research raises issues that are both painful and profound. Resolution of these issues should certainly not be based on unfounded speculation and emotional exploitation of those desperately hoping for a cure.

The bill opens the door to the use of human life as simply raw material, to make objects and commodities out of life.

Questions

1. According to Cummins why must the embryo be protected?
2. What is the danger in using emotional arguments?
3. Is there any proven genuine need for ESCR?
4. What are the three compelling scientific arguments against the use of embryonic stem cells as a treatment for disease and injury?
5. What case does Cummins make for adult stem cell research?
6. Cummins' concluding statement points to what real danger?



Jason Kenney M.P.

Mr. Jason Kenney (Calgary Southeast, Canadian Alliance): Clearly, twelve years after the report of the Royal Commission on New Reproductive Technologies and two and a half years after the tabling of draft legislation in this place to address the absence of a law, it is time for us to be seized of the threat posed to human life and, indeed, the possibilities offered by some of these ethical technologies. That is why we do need to pass some form of legislation with respect to many of the matters covered in the bill.

However, let me focus now on my profound objections to the deficiencies of the bill. First let me say that the bill is predicated on a false philosophy of man, a false understanding of who we are as human beings and what gives us our dignity, wherein lies our claim to certain rights. Let me quote, for instance, a central and operative clause of the bill, clause 5, in which paragraph 5(1)(b), under the heading "Prohibited Activities", reads:

No person shall knowingly

(b) create an *in vitro* embryo for any purpose other than creating a human being or improving or providing instruction in assisted reproduction procedures;—

This reflects a central flaw in the philosophy which undergirds the bill, in two respects. Saying that no person shall knowingly create an *in vitro* embryo for any purpose other than creating a human being suggests by implication that one could create an embryo for a purpose other than that of creating a human being. This is completely illogical.

It is tautological to say that the creation of an embryo leads to the creation of a human being. An embryo is the product of the fertilization of the reproductive genetic material of a mother and a father of the homo sapiens species. It can be no other than the offspring of human parentage. It is therefore, biologically speaking, human, and it is a being. It has its own independent momentum. It has its own independent genetic code. It has its own identity. It is a separate, living, organic human being.

To suggest that an embryo can be something other than a human being is to argue against elementary biology, elementary science and, indeed, an elementary philosophical understanding of what man is.

Questions

1. Briefly summarize Kenney's main criticisms of the bill?
2. What internal contradictions are to be found in the bill according to Jason Kenney?

Cloning at the United Nations

In a November article in *The Interim* newspaper, Samantha Singson reported that a debate on the issue of a cloning ban reverberated also at the United Nations in New York in early

October, 2003. According to Singson, France and Germany had led an initial drive to draft a cloning *convention* (an international agreement) whose intent was “to create a ban that would only prohibit reproductive cloning”. Other countries instead, led by Costa Rica “formally introduced a resolution calling for the working group to widen its scope and formulate a comprehensive ban on all forms of human cloning”.

Many representatives from non-governmental organizations (NGOs) work the corridors and backrooms of the UN lobbying the official delegates to adopt conventions favorable to their point of view. Jeanne Head, a long time pro-life lobbyist at the UN “remarked that this was perhaps the most important life issue that she had ever had to deal with at the UN.” In her lobbying efforts she stated that if the UN were “to pass only a partial ban on cloning (meaning a reproductive cloning ban only) it would be the first convention ever to necessitate the killing of an innocent human life ...embryos would be created for the express purpose of harvesting their stem cells, thereby killing them”.

The upshot of the discussions and lobbying is that the issue continues to be a hot item, with nations taking stands based on their understanding of the terms of the convention and the ethical and scientific complexities that surround the cloning issue.

Questions

1. Investigate the terms “a total ban” and “a ban on reproductive cloning”. Explain the essential difference. Is this really a difference or is it a sham?
2. Should the cloning debate be left to scientists to decide? Why or why not?
3. Should one be encouraged by the fact that the UN has taken up this issue?
4. How would a UN convention influence how individual states determine their own national policies on the issue?
5. Was Jeanne Head insightful in her comment on the importance of this cloning issue? Why or why not?
6. Why and how would people draw a direct connection between the cloning debate and the issue of abortion?
7. As a follow-up research project find the text of the Costa Rican resolution to ban cloning and summarize its key points.
8. Find out the current status of the two resolutions on the banning of cloning still before the UN.

Section IV

The Promise of Adult Stem Cell Research

Adult stem cell triumphs are genuine and they occur virtually daily. It is difficult to keep up with the research and the medical breakthroughs that flow from it. Adult stem cell successes receive little attention from the mainstream press,

but every hopeful attempt made in embryonic stem cell research is given prominent coverage even when nothing concrete develops from the attempts. The supporters of embryonic stem cell research use celebrities suffering from some sort of debilitating disease (Michael J. Fox, Christopher Reeve, Mary Tyler Moore, etc) to make an emotional pitch for legislation permitting embryonic stem cell research. Everyone wants a cure for diseases but should it come about at other human beings’ expense?

Press Report: Stem cells used in heart operation

South African Press Association 04/10/2002

Newcastle, Australia - An Australian man has undergone an operation using adult stem cells in a world-first trial to repair his damaged heart, Australian researchers announced on Wednesday. Jim Nichol (74) had already had three heart bypass operations when doctors at the John Hunter Hospital in the New South Wales city of Newcastle decided to try to save his life with stem cells. Cardiologist Suku Thambar of the Hunter Medical Research Institute said it was the first ever clinical trial of a procedure that doctors hope could help almost a third of all patients with end-stage coronary artery disease.

But it was a procedure targeting what are known as “no option patients” - those with little or nothing to lose, Thambar told reporters here. He said bone marrow was taken from Nichol’s hip and stem cells were extracted from the marrow and injected into the muscle of his heart. If the experiment works the way the doctors anticipate, the injected stem cells will begin secreting growth factors which will stimulate the growth of blood vessels in his heart, easing his constant chest pain and reducing his need for medication. “This is a trial which is seeking to examine the efficacy of the patient’s own adult bone marrow-derived stem cells to increase the blood vessel growth in the heart,” he said. “It involves a group of patients ... who have got vessels which are not amenable to the conventional methods of improving blood supply such as angioplasty or coronary artery bypass surgery.”

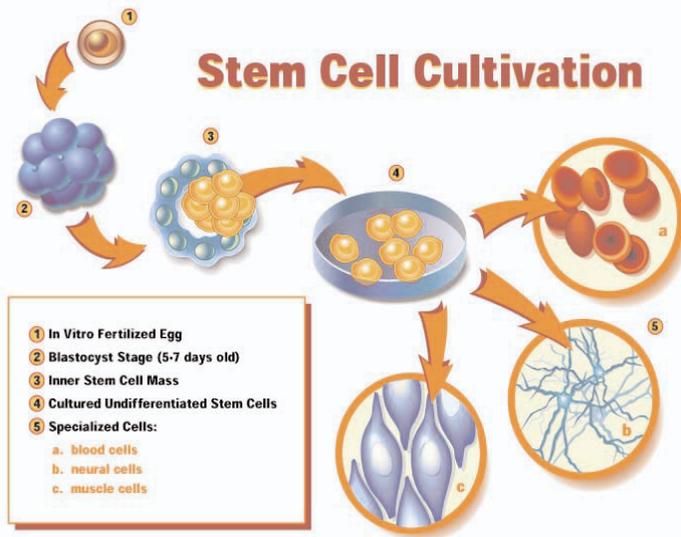
Safety and feasibility studies were completed overseas. Thambar said Nichol had been discharged from hospital on Tuesday in a stable condition, but it would be some months before it became clear whether the procedure was working. The trial follows news that a US man had apparently recovered from Parkinson’s disease after being injected with stem cells from his own brain. Because the procedures use adult stem cells, they are distinct from the more controversial use of embryonic stem cells, which are harvested from human embryos. Embryonic stem cell research using surplus IVF embryos will proceed in Australia under a decision by the states and Commonwealth announced by Prime Minister John Howard last week. Thambar said although there were definite benefits in using adult stem cells no decision had been made yet about whether embryonic stem cells would be used in later stages of the current trial. The experiment was overseen by Dr. Shmuel Fuchs of the cardiovascular

research institute at the Washington Hospital Centre and Dr. Phil Rowlings of the Newcastle Mater Misericordia Hospital. It used a high-tech cardiac imaging system to create a 3-D map of the heart which enabled the operation to be carried out with pin-point accuracy. Further clinical trials are expected to take place in Hong Kong and China with other countries, including Italy, expected to join further down the track.

http://www.beaumont-hospitals.com/pls/portal30/cportal30.story_page1?l_recent=302

Questions

1. What did Dr. Suku Thambar say about the potential of the use of adult stem cells in treating coronary artery disease?
2. How did the choice of patients and the procedures used respect ethical protocols?



Section V

Cloning, Stem Cell Research and the Nuremberg Code

Scientists have on many occasions claimed an unfettered right to conduct research and do experimentation. At times these learned human beings have served the interests of totalitarian governments that held objectionable visions of humanity and the right ordering of society. During the 1930's and 1940's scientists and doctors in Nazi Germany conducted experiments on human beings for a variety of purposes. The abuses associated with their practices led the victorious Allied powers to conduct investigations into these practices and led to the adoption of an international convention Directives for Human Experimentation called the Nuremberg Code. The tenets and articles of the code are given below.

NUREMBERG CODE

The duty and responsibility for ascertaining the quality of the consent rests upon each individual who initiates, directs or engages in the experiment. It is a personal duty and responsibility which may not be delegated to another with impunity.

1. The experiment should be such as to yield fruitful results for the good of society, unprocurable by other methods or means of study, and not random and unnecessary in nature.
2. The experiment should be so designed and based on the results of animal experimentation and a knowledge of the natural history of the disease or other problem under study that the anticipated results will justify the performance of the experiment.
3. The experiment should be so conducted as to avoid all unnecessary physical and mental suffering and injury.
4. No experiment should be conducted where there is an a priori reason to believe that death or disabling injury will occur; except, perhaps, in those experiments where the experimental physicians also serve as subjects.
5. The degree of risk to be taken should never exceed that determined by the humanitarian importance of the problem to be solved by the experiment.
6. The voluntary consent of the human subject is absolutely essential. This means that the person involved should have legal capacity to give consent; should be so situated as to be able to exercise free power of choice, without the intervention of any element of force, fraud, deceit, duress, over-reaching, or other ulterior form of constraint or coercion; and should have sufficient knowledge and comprehension of the elements of the subject matter involved as to enable him to make an understanding and enlightened decision. This latter element requires that before the acceptance of an affirmative decision by the experimental subject there should be made known to him the nature, duration, and purpose of the experiment; the method and means by which it is to be conducted; all inconveniences and hazards reasonable to be expected; and the effects upon his health or person which may possibly come from his participation in the experiment.
7. Proper preparations should be made and adequate facilities provided to protect the experimental subject against even remote possibilities of injury, disability, or death.
8. The experiment should be conducted only by scientifically qualified persons. The highest degree of skill and care should be required through all stages of the experiment of those who conduct or engage in the experiment.
9. During the course of the experiment the human subject should be at liberty to bring the experiment to an end if he has reached the physical or mental state where

continuation of the experiment seems to him to be impossible.

10. During the course of the experiment the scientist in charge must be prepared to terminate the experiment at any stage, if he has probable cause to believe, in the exercise of the good faith, superior skill and careful judgment required of him that a continuation of the experiment is likely to result in injury, disability, or death to the experimental subject.

Reprinted from *Trials of War Criminals before the Nuremberg Military Tribunals under Control Council Law No. 10, Vol. 2, pp. 181-182.* Washington, D.C.: U.S. Government Printing Office, 1949.

Questions

1. Investigate and report briefly on why and when the Nuremberg Code was written. Was it necessary to promulgate this code? Should people who contravene the code today be held responsible for their crimes?
2. It is a scientifically accepted fact that embryos are human beings (and therefore human subjects), how does the Nuremberg code apply to embryonic stem cell research? (Please note that being a human being is different from being a human person in law. Jews in Germany, African-Americans and Canadian women, were, at different times, declared non-persons legally, as embryos and fetuses are today.)
3. Is there anything in the Nuremberg Code which would condone/permit stem cell research resulting in the killing of the embryo?
4. Which articles of the Code appear to protect the embryo from harm through experimentation?

various interventions upon embryos and human fetuses. The aims pursued are of various kinds: diagnostic and therapeutic, scientific and commercial. From all of this, serious problems arise. Can one speak of a right to experimentation upon human embryos for the purpose of scientific research? What norms or laws should be worked out with regard to this matter? The response to these problems presupposes a detailed reflection on the nature and specific identity - the word "status" is used - of the human embryo itself.

At the Second Vatican Council, the Church for her part presented once again to modern man her constant and certain doctrine according to which: "Life once conceived, must be protected with the utmost care; abortion and infanticide are abominable crimes". (23) More recently, the Charter of the Rights of the Family, published by the Holy See, confirmed that "Human life must be absolutely respected and protected from the moment of conception".(24)

This Congregation is aware of the current debates concerning the beginning of human life, concerning the individuality of the human being and concerning the identity of the human person. The Congregation recalls the teachings found in the Declaration on Procured Abortion: "From the time that the ovum is fertilized, a new life is begun which is neither that of the father nor of the mother; it is rather the life of a new human being with his own growth. It would never be made human if it were not human already. To this perpetual evidence ... modern genetic science brings valuable confirmation. It has demonstrated that, from the first instant, the programme is fixed as to what this living being will be: a man, this individual-man with his characteristic aspects already well determined. Right from fertilization is begun the adventure of a human life, and each of its great capacities requires time ... to find its place and to be in a position to act". (25) This teaching remains valid and is further confirmed, if confirmation were needed, by recent findings of human biological science which recognize that in the zygote (the cell produced when the nuclei of the two gametes have fused) resulting from fertilization the biological identity of a new human individual is already constituted. Certainly no experimental datum can be in itself sufficient to bring us to the recognition of a spiritual soul; nevertheless, the conclusions of science regarding the human embryo provide a valuable indication for discerning by the use of reason a personal presence at the moment of this first appearance of a human life: how could a human individual not be a human person? The Magisterium has not expressly committed itself to an affirmation of a philosophical nature, but it constantly reaffirms the moral condemnation of any kind of procured abortion. This teaching has not been changed and is unchangeable.(26)*

Thus the fruit of human generation, from the first moment of its existence, that is to say from the moment the zygote has formed, demands the unconditional respect that is morally due to the human being in his bodily and spiritual totality. The human being is to be respected and

The Catholic Church's Instruction on Embryonic Stem Cell Research.

The church document *Donum Vitae (The Gift of Life)* contains the Catholic Church's instruction on biomedical research issues. Some excerpts follow.

Respect for Human Embryos

Careful reflection on this teaching of the Magisterium and on the evidence of reason, enables us to respond to the numerous moral problems posed by technical interventions upon the human being in the first phases of his life and upon the processes of his conception.

1. What respect is due to the human embryo, taking into account his nature and identity?

The human being must be respected - as a person - from the very first instant of his existence. The implementation of procedures of artificial fertilization has made possible

treated as a person from the moment of conception; and therefore from that same moment his rights as a person must be recognized, among which in the first place is the inviolable right of every innocent human being to life. This doctrinal reminder provides the fundamental criterion for the solution of the various problems posed by the development of the biomedical sciences in this field: since the embryo must be treated as a person, it must also be defended in its integrity, tended and cared for, to the extent possible, in the same way as any other human being as far as medical assistance is concerned.

Questions

1. According to this official teaching of the Catholic Church, what is that church's position on embryonic stem cell research?
2. From this teaching is there any discernible difference in killing embryos to take their stem or the procurement of an abortion?
3. "How could a human individual not be a human person?" What important point is being made in this question posed in the teaching document?
4. According to *Donum Vitae* how does the evidence of science support the church's teaching on abortion and stem cell research?

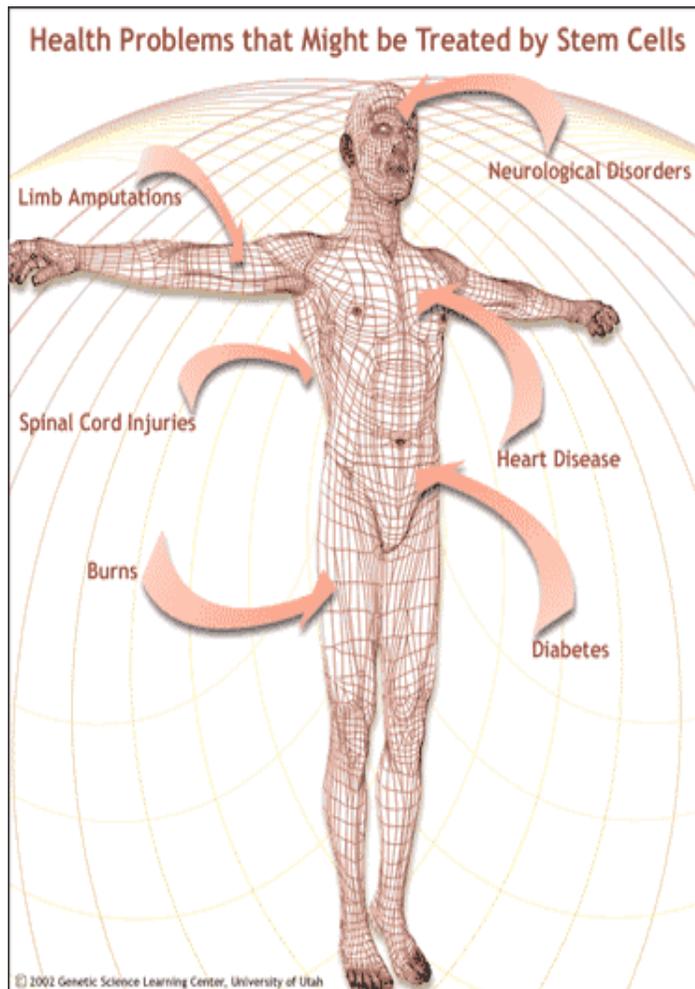
which are still alive and experimentation carried out on embryos which are dead. If the embryos are living, whether viable or not, they must be respected just like any other human person; experimentation on embryos which is not directly therapeutic is illicit.(29) No objective, even though noble in itself, such as a foreseeable advantage to science, to other human beings or to society, can in any way justify experimentation on living human embryos or fetuses, whether viable or not, either inside or outside the mother's womb. The informed consent ordinarily required for clinical experimentation on adults cannot be granted by the parents, who may not freely dispose of the physical integrity or life of the unborn child. Moreover, experimentation on embryos and fetuses always involves risk, and indeed in most cases it involves the certain expectation of harm to their physical integrity or even their death. To use human embryos or fetuses as the object or instrument of experimentation constitutes a crime against their dignity as human beings having a right to the same respect that is due to the child already born, and to every human person.

The Charter of the Rights of the Family published by the Holy See affirms: "Respect for the dignity of the human being excludes all experimental manipulation or exploitation of the human embryo".(30) The practice of keeping alive human embryos in vivo or in vitro for experimental or commercial purposes is totally opposed to human dignity.

Medical research* must refrain from operations on live embryos, unless there is a moral certainty of not causing harm to the life or integrity of the unborn child and the mother, and on condition that the parents have given their free and informed consent to the procedure. It follows that all research, even when limited to the simple observation of the embryo, would become illicit were it to involve risk to the embryo's physical integrity or life by reason of the methods used or the effects induced. As regards experimentation,* and presupposing the general distinction between experimentation for purposes which are not directly therapeutic and experimentation which is clearly therapeutic for the subject himself, in the case in point one must also distinguish between experimentation carried out on embryos

in the case of experimentation that is clearly therapeutic, namely, when it is a matter of experimental forms of therapy used for the benefit of the embryo itself in a final attempt to save its life, and in the absence of other reliable forms of therapy, recourse to drugs or procedures not yet fully tested can be licit (31)

The corpses of human embryos and fetuses, whether they have been deliberately aborted or not, must be respected just as the remains of other human beings. In particular, they cannot be subjected to mutilation or to autopsies if their death has not yet been verified and without the consent of the parents or of the mother. Furthermore, the moral requirements must be safeguarded that there be no complicity in deliberate abortion and that the risk of scandal be avoided. Also, in the case of dead fetuses, as for the corpses of adult persons,



all commercial trafficking must be considered illicit and should be prohibited.

** Since the terms “research” and “experimentation” are often used equivalently and ambiguously, it is deemed necessary to specify the exact meaning given them in this document.*

1) By research is meant any inductive-deductive process which aims at promoting the systematic observation of a given phenomenon in the human field or at verifying a hypothesis arising from previous observations.

2) By experimentation is meant any research in which the human being (in the various stages of his existence: embryo, foetus, child or adult) represents the object through which or upon which one intends to verify the effect, at present unknown or not sufficiently known, of a given treatment (e.g. pharmacological, teratogenic, surgical, etc.).

Questions

1. “Experimentation on embryos which is not directly therapeutic is illicit.” What is the reasoning behind this statement?
2. Are there any exceptions made in this teaching?
3. Why can’t parents give consent for experimentation on their embryos?
4. How does experimentation on a human embryo or foetus constitute a crime against his dignity as a human being?
5. “In the case of dead foetuses, as for the corpses of adult persons, all commercial trafficking must be considered illicit and should be prohibited”. Why the concern with dead foetuses? How does this relate to stem cell research?
6. Compare this portion of *Donum Vitae* with the *Nuremberg Code*. Do they have similar messages?
7. (a) Do you think it is wrong to do dangerous research on born human beings?
(b) Do you think it’s wrong to do research on unborn human beings? Explain why.
8. Look at your answers for question 7. (a) & (b). Are they the same or different? Explain why you came to the same answer for both groups, or why you came to a different answer.
9. “The field of human embryology asserts without exception that a human embryo is a human being. A human embryo is a living, genetically distinct and self-directing member of the human species. It is the internationally accepted agreement that it is unacceptable to experiment on human beings without their consent (Nuremberg Code). Therefore, it is never acceptable to experiment on human embryos.” Is this a logical argument against human embryonic research and experimentation?
10. What is the difference between *research* and *experimentation*?

11. Those who support research say that if it may help people suffering from serious diseases, it should be allowed. What important principles would be betrayed if this were allowed?

12. Why is it dangerous to base moral theory on “natural sentiments”? What is meant by natural sentiment?

13. What evidence is there that the “appeal to sentiment” has been used in the abortion debate?

14. How has the slippery slope argument been proven right over time?

Some Protestant Church Views

The official statements of evangelical Protestant denominations uniformly condemn both reproductive and therapeutic cloning. The Southern Baptist Convention passed a resolution in 2001 that listed concerns about the safety of cloning, the destruction of human embryos for research purposes, and the belief that cloning turns procreation into manufacture. Of course anything which is manufactured is subject to sale and to patent laws.

A report in the *Washington Post* of November 17, 2003 by Rick Weiss indicates how complicated the legal issues become as he described the debate between medical researchers and opponents of embryonic stem cell research over the possible patenting of human life.

Douglas Johnson, legislative director of the National Right to Life Committee had this to say on the issue: “The biotechnology industry is lobbying to keep the legal door open for patenting cloned or genetically modified human embryos to ensure the payment of royalties for each embryo created or sold under license. All of that is essential for making human embryo farms and fetus farms profitable.”

<http://www.washingtonpost.com/ac2/wp-dyn/A49678-2003Nov16?language=printer>

A statement from the Office of the President of the Lutheran Church – Missouri Synod, as well as the statements of evangelical-oriented interest groups – such as Focus on the Family and Concerned Women for America – oppose both sorts of cloning on similar grounds. The concerns that evangelical leaders express about reproductive cloning resemble the arguments of one of the most articulate and visible evangelical opponents of cloning, Gilbert Meilaender. In testimony before the National Bioethics Advisory Commission (NBAC) in 1997, Meilaender argued that cloning would result in children who were “made,” not “begotten.” By this he means that if children are considered to be instruments of our will, as our projects, instead of equal partners with ourselves in humanity, then they are “made.” “Begotten” is what he considers the preferred relationship between parents and children. “Begotten” is the relationship of the Son – Jesus – to the Father in the Nicene creed. It is the term chosen to indicate that Jesus was not “made” (that is, not subsidiary to God), but equal to God. Meilaender locates this concern with “making” children within the Biblically mandated relationship of marriage.

(Meilaender, Gilbert. 1997. "Begetting and Cloning." *First Things*, June/July, 4143).

Other conservative Protestant groups are concerned with "embryo wastage" and the "tearing of the fabric of the family" – usually "conservative" concerns – but also with the "use or abuse of people, exploitation of women, . . . the compromising of human distinctiveness, the lessening of genetic diversity, the direction of research and development being controlled by corporate profit and/or personal gain, and the invasion of privacy."

<http://www.google.ca/search?q=cache:i5BO4W6nxQJ:pewforum.org/publications/reports/adamsrib.pdf+Muslim+opposition+to+ESCR&hl=en&ie=UTF-8>

Questions

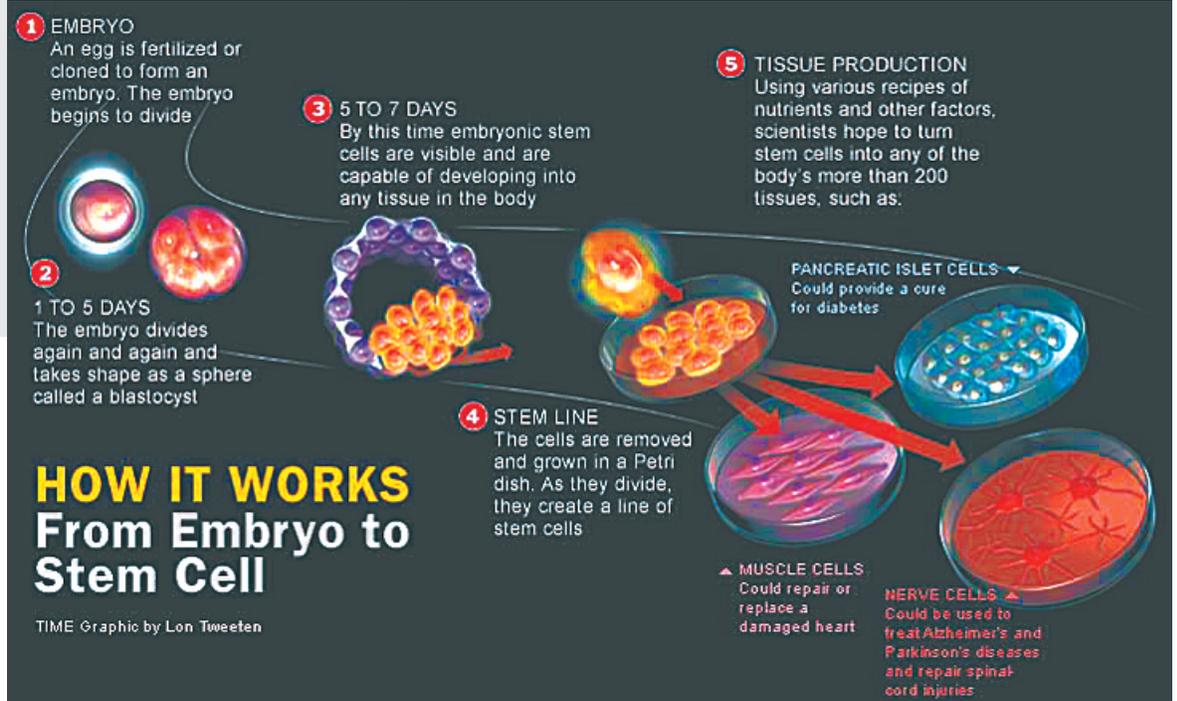
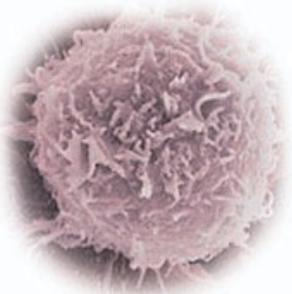
1. In addition to concerns about the status of the embryo, what other concerns lead many Protestant churches to oppose ESCR?
2. What are some of the practical problems cited by them?
3. How does Meilaender express a biblically inspired stance? Is it an appealing argument?

Follow up activity.

In role playing the governing party in Parliament draft a bill to regulate cloning and human embryonic stem cell research taking into account the need to :

- a) protect human life from the moment of conception
- b) permit legitimate research into embryonic human life
- c) permit research leading to cures for degenerative diseases
- d) encourage the kind of research which promotes Canadian jobs and breakthroughs in this lucrative field
- e) reflects societal aspirations

Can these goals be reconciled or are they unalterably opposed? (If the latter, which goals should prevail and why?)



Bibliography/Sources

these sources are reliable and useful

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God and the Embryo: Religious Voices on Stem Cells and Cloning, Brent Waters and Ronald Cole-Turner, editors

First Things, June/July, 4143). a magazine exploring religion and public issues

The Interim, Canada's life and family newspaper, archived articles available on www.lifesite.net

National Review; July 23rd Issue

In addition to the websites cited at the conclusion of each section, the following help to give a balanced view of the problems associated with embryonic stem cell research.

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www.lifesite.net/interim/2003/oct/index

www.parl.gc.ca/common/ChamberHouse/Debates.asp?Language=E

www.paulszabo.com/main

www.stemcell_research.org/

www.cbhd.org/resources/stemcells/hensley_2003-07-09

<http://www.evangelist.org/evv/bish1001.htm>

[//www.vitalsignsministries.org/vsmESCR-Pro-lifepositionrational.html](http://www.vitalsignsministries.org/vsmESCR-Pro-lifepositionrational.html)

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