



FACILITATION GUIDE FOR PROGRAM 4

CONDITION: CRITICAL HEALTH CARE IN THE UNITED STATES

A Series of Education Programs on Health Care Ethics

Ethics Program 4: Stem Cell Research, “Frontier of Hope And Concern”

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SECTION II

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SECTION I

Narrative Video with Expert Commentary

NARRATIVE VIDEO

The 30-minute video focuses on the emerging debate over adult and embryonic stem cells research and therapies. The program considers the development of possible stem cell therapies that may become available for patients. The video explains some of the recent scientific and technological breakthroughs in this research. And the program considers how discourse on the status of the developing human embryo has important policy implications for embryonic stem cell research. Finally, these ongoing developments in stem cell research and therapies require sensitivity to the tension between alleviating human suffering and respecting human nature. The ethical debate in the video is presented in four sections.

1. The development of stem cell therapies (medicine, cure, and care)
2. The development of stem cell research (science and technology)
3. The developing human embryo: policy implications for embryonic stem cell research
4. The alleviation of human suffering and respect for human nature

EXPERT COMMENTARY

The video includes expert commentary by internationally recognized figures in the debate on stem cell research and therapy, including: Professor Rebecca Dresser, Dr. John Gearhart, Professor Robert George, Dr. Leon Kass, and Dr. Doug Melton.

LEARNING OBJECTIVES

The 30-minute video enables participants to foster discussion at the end of each section as well as at the end of the program. Participants will be able to:

- understand potential developments in adult and embryonic stem cell therapies
- understand recent developments in embryonic stem cell research
- understand the policy implications of debate about the status of the developing human embryo for embryonic stem cell research
- understand the tension between alleviating suffering and respecting nature in stem cell research

STRUCTURE OF THE EDUCATION SESSION

The facilitator should explain the learning objectives, show the video, and then engage the participants in discussion and/or assign follow-up projects.



SECTION IV

Individual Learning Model

The Individual Learning Model complements the Group Learning Model by providing individual students with interactive independent study. This self-learning multimedia tool contains quizzes, on-screen readings, and videos for the entire DIA Learning Ethics Series.

INDIVIDUAL LEARNING MODEL

The Individual Learning Model is a chaptered, Web-based program available as Full Course or Selected Topics. It offers the following items:

- 60-minute narrative video with expert commentary
- Up to 12 chaptered curriculum topics, each including:
 - 5-minute narrative video components
 - On-screen reading components
 - On-screen quiz components
- Pre-test and post-quiz learning outcome measurement
- Real-Time Score-tracking
- Automated Certification by recognized accrediting bodies

COURSEWORK

The Catholic Version of the Individual Learning Model for Ethics Program 4 includes the following coursework:

- Chapter 1. Stem Cell Research: Aligning Science with Ethics
- Chapter 2. The Development of Human Stem Cells
- Chapter 3. Developments in Stem Cell Research and Therapy
- Chapter 4. Human Stem Cells and Examples of the Treatment of Disease
- Chapter 5. The Development of Adult Stem Cell Therapies
- Chapter 6. Creating a Stem Cell Donor via Pre-implantation Genetic Diagnosis
- Chapter 7. Ethics of Stem Cell Research: Policy and Alleviating Human Suffering
- Chapter 8. Ethics of Stem Cell Research: the Commodification of Human Nature
- Chapter 9. Ethics of Stem Cell Research: Access to Stem Cell Registries and Banks
- Chapter 10. Ethics of Embryonic Stem Cell Research: Status of the Human Embryo
- Chapter 11. Politics and Public Policy in the Debate on Embryonic Stem Cell Research
- Chapter 12. Human Therapeutic Cloning: the Ethics and Policy Debate



SECTION III

Project or Assignments for the Program

These projects or assignments could be distributed among participants for them to expand on the answers in the discussion section by further review of the video.

I THE DEVELOPMENT OF STEM CELL THERAPIES (MEDICINE, CURE, AND CARE)

- Explain some of the expectations for medical therapies being developed from adult and embryonic stem cells.
- Explain the ethical dilemma that arises by developing medical therapies from embryonic stem cells.

II THE DEVELOPMENT OF STEM CELL RESEARCH (SCIENCE AND TECHNOLOGY)

- Explain some of the research circumstances that led to human embryonic stem cells being isolated and cultivated.
- Explain the importance of the so-called plasticity of embryonic stem cells.

III THE DEVELOPING HUMAN EMBRYO: POLICY IMPLICATIONS FOR EMBRYONIC STEM CELL RESEARCH.

- Explain the stance on human life that opposes embryonic stem cell research.
- Explain the stance on human life that supports embryonic stem cell research.

IV THE ALLEVIATION OF HUMAN SUFFERING AND RESPECT FOR HUMAN NATURE

- Provide some examples of hope from stem cell research and potential therapies for patients suffering with crippling diseases.
- Explain the tension between alleviating human suffering and respecting human nature in using potential embryonic stem cell therapies.



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QUESTIONS & ANSWERS

Discussion Questions for the Program

The suggested “answers” simply indicate some items from the video that relate to the question. The facilitator should encourage a broad range of responses from the video and beyond.

I THE DEVELOPMENT OF STEM CELL THERAPIES (MEDICINE, CURE, AND CARE)

- **What are some of the expectations for medical therapies being developed from adult and embryonic stem cells?**

Adult stem cell research uses cells and tissue from humans who have been born, such as from the umbilical cord blood from newborn babies. For example, the story of Dennis Turner explains how the symptoms of his Parkinson’s disease appear to have been reduced through an experimental therapy using his own adult stem cells. Embryonic stem cell research is considered by many also to offer hope for treating and curing diseases. For example, the story of Frank Cocozzelli explains his hope for a future cure for his muscular dystrophy in the emerging science and technology of embryonic stem cells. These respective hoped-for cures symbolize what is becoming a growing and complicated debate about the ethics of using adult stem cells and embryonic stem cells to develop medical treatments.

- **What ethical dilemma arises by developing medical therapies from embryonic stem cells?**

Stem cell research is beginning to provide scientists with the tools to unlock the mystery of human life and provide new medical therapies to treat diseases, like cancer, diabetes, Alzheimer’s and Parkinson’s. While there is great hope, there is also great concern. Embryonic stem cell research uses cells known for their versatility to develop into any cell of the body. However, obtaining embryonic stem cells requires the unavoidable and controversial destruction of the human blastocyst, the stage before the embryo begins its full development. Hence, the ethical debate on embryonic stem cell research has created an escalating tension between the need to respect the early human embryo and an obligation to alleviate widespread suffering of patients.

II THE DEVELOPMENT OF STEM CELL RESEARCH (SCIENCE AND TECHNOLOGY)

- **What research circumstances led to human embryonic stem cells being isolated and cultivated?**

The first successful experiments in isolating embryonic human stem cells took place in 1998 by two different research teams: Dr. Jamie Thomson with his research team at the University of Wisconsin in Madison; and Dr. John Gearhart with his research team at Johns-Hopkins.

- **Why is the so-called plasticity of embryonic stem cells important for medical research?**

The so-called “plasticity” of embryonic stem cells refers to them being undifferentiated with the potential to develop into any cell of the human body. Scientific experts believe that the information in these undifferentiated cells will contribute significantly to the future of medicine insofar as these cells can develop in many different ways in the human body.



QUESTIONS & ANSWERS

Discussion Questions for the Program

III THE DEVELOPING HUMAN EMBRYO: POLICY IMPLICATIONS FOR EMBRYONIC STEM CELL RESEARCH

- **What is the stance on human life that opposes embryonic stem cell research?**

Some ethics experts argue that the most controversial question around embryonic stem cell research has been a question of the means: is it alright to seek the cures for disease by means which involve the destruction of embryonic human life? This stance holds that the very early embryo (from which stems cells are harvested) is human life with a personal status from its beginning.

- **What is the stance on human life that supports embryonic stem cell research?**

Some ethics experts defend the use of embryonic stem cell research because medicine is ethically charged with trying to improve the quality of life of patients. Hence, some argue that using embryonic stem cells to develop into other cells in the body, such as liver cells or cardiac muscle cells, could improve the quality of life for millions of people. This stance holds that the very early embryo (from which stems cells are harvested) is not human life with a personal status from its beginning.

IV THE ALLEVIATION OF HUMAN SUFFERING AND RESPECT FOR HUMAN NATURE

- **What are some examples of hope from stem cell research for patients suffering with crippling diseases?**

The case study of Frank Coccozzelli exemplifies the hope for a potential therapy from embryonic stem cell research for muscular dystrophy, even if it is in the distant future. The case study of Dennis Turner exemplifies the hope for an actual therapy for his Parkinson's disease using his own adult stem cells.

- **What is the tension between alleviating human suffering and respecting human nature in using potential embryonic stem cell therapies?**

If embryonic stem cells could be harvested without destroying the developing human embryo the basic ethical concerns about protecting human life from the beginning might be resolved. Otherwise, the tension between alleviating suffering and respecting life will remain: one side arguing that science has an obligation to do all it can to improve the human condition, the other side arguing that such research should not occur at the expense of human life.