Ethics seeks to determine what a person should do, or the best course of action, and provides reasons why. It also helps people decide how to behave and treat one another, and what kinds of communities would be good to live in.

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Complements of National Institutes of Health

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"My sisters keeper" by Jodi Picoult tells the story of Anna Fitzgerald, 13 and her older sister Kate, who suffers from acute promyelocytic leukemia, a blood cancer. Anna was conceived by (IVF & pre-genetic diagnosis) as a "savior sibling" in order to have a tissue donor source for Kate. Anna has donated cells and tissues multiple times but sues her parents for the rights to her own body when she is asked to donate a kidney to Kate.

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- 2. What are the relevant facts?
- 3. Who are the stakeholders? (Who or what could be affected by how the question(s) is resolved?)
- 4. What are the relevant ethical considerations? Examples include:
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 - C) Fairness
 - D) Authenticity
 - E) Other (Fill in ethical considerations you think are relevant to this case)
- 6. Should parents be allowed to create a savior sibling?
- 7. Would it make a difference if you met Kate and her parents?
- 8. Create two additional questions that your feel is relevant to the discussion.

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Octomom: A single mother, Nadya Suleman, gave birth to octuplets from in vitro fertilization (IVF) in 2009. She already had six kids, was unemployed and on public assistance programs.

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 - E) Other (Fill in ethical considerations you think are relevant to this case)
- 6. How many embryos should be returned to the uterus for IVF?
- 7. Should age for (IVF) be limited (success rates decrease with age), number of already conceived children, marital status, financial situation or possibility of medical complications be factors in this decision?
- 8. Create two additional questions that your feel is relevant to the discussion.

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Geron Company recently stopped a clinical trial for lack of participants where they were injecting embryonic stem (ES) –derived oligodendrocytes or nervous system support cells into recent (within the last two weeks) human spinal cord injury victims to try to restore function.

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 - E) Other (Fill in ethical considerations you think are relevant to this case)
- 6. Can you get the proper consent from a person that experienced a life altering experience such as spinal cord injury in the last two weeks?
- 7. Should unwanted in vitro fertilization embryos (blastocysts no organs) be used to create ES cells to heal other individuals rather than leaving the blastocysts in liquid nitrogen until they are no longer viable? Note: The only method known to create a significant number of ES cells is from early embryos
- 8. Create two additional questions that your feel is relevant to the discussion.

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Non-FDA approved stem cells – Is it ethical to sell lotions containing adult skin stem cells that claim they will prevent or even erase wrinkles by secreting collagen (a protein that decreases as skin ages) if the scientific data to support this claim is uncertain and hasn't been approved by the FDA? Note: Vitamin and other supplements are sold in the US without FDA approval.

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<u>Transgenic Pigs:</u> Genetic engineers are exploring ways to produce useful changes in farm animals. Some scientists have successfully transplanted a gene from a cow into the fertilized egg of a pig. The pig that developed grew faster and had leaner meat than other pigs—both desirable traits in animals raised for food. The new pig also had abnormally short legs and became crippled with arthritis. (The scientists hope to be able to eliminate this condition in future transplants.) The genetically altered pig could pass its new traits, along with all its other traits to its offspring.

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 - E) Other (Fill in ethical considerations you think are relevant to this case)
- 6. Based on the case described above, list some reasons for and against using genetic engineering to produce changes in farm animals.
- 7. Create two additional questions that your feel is relevant to the discussion.

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5.

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Genetically Modified Foods: Since they were first introduced in 1994 bioengineered or genetically modified organisms (GMO's) have become common in the American supermarket and diet. Most GM plants are engineered to produce pest-killing chemicals or to resist weed-killing chemicals. Today, approximately 85% percent of the corn crops grown in the U.S. contain a gene for Bt-toxin, a natural insecticide that protects corn plants from the European corn borer, a major insect pest. Bt-corn, as this GM corn is called enables farmers to produce more food on fewer acres, increasing food production and profits. Recently developed GM food crops contain essential vitamins that are lacking in the diets of many people. For example golden rice contains genes that greatly increase its content of beta-carotene, which the body uses to make vitamin A. This high productivity and nutritional benefits of GM crops are especially important in developing countries where their use may prevent famine and ease suffering. Because they increase production and reduce the need for chemical pesticides, GM crops can be beneficial for the environment. Most consumers, however, are concerned about the long-term impact of these crops. The European Union for example has banned the planting or sale of GM food crops and requires that others be prominently labeled as genetically modified.

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 - E) Other (Fill in ethical considerations you think are relevant to this case)
- 6. Based on the case described above, list some reasons for and against using genetic engineering to produce changes in farm animals.
- 7. Should GM foods here in the United States be more tightly controlled?
- 8. Create two additional questions that your feel is relevant to the discussion.

Position and Justification: