

Special Topics in Biological Sciences: Genetically Modified Organisms

Guidelines for Preparing for a Debate on Ethics

50 points

Date of Debate: October 23

In this debate, you will serve as a member of one of two panels. One panel represents the National Board of Ethics, a group of politicians interested in protecting citizens against unwanted ethical consequences of new technologies. The other panel represents the biotech company Genovations, which has created national controversy by its development and sale of several applications of genetic engineering. One panel therefore is *primarily* concerned with ethical questions (and possibly re-election), and the other with revenue from product development, distribution and sales.

Two questions: Is the National Board of Ethics panel necessarily against product development and sales? Is the Genovations panel necessarily against application of ethical principles?

You will draw for assignment to a panel. It is not necessary that you believe all of the positions that might be taken by the panel you draw, but you will be role-playing and defending them.

It is not your panel's objective to always disagree with the other panel. There will be some points of agreement as well as disagreement. Exposing both the agreements and disagreements is your goal.

The instructor will serve as moderator and a reporter for the national press. As such, the instructor is in a neutral position, not for or against a panel's interests. (Question: Is it true that the press is neutral?)

Preparation for the Debate: Read this document carefully and prepare comments --- mental or written --- in response to the questions below. It is important that you identify reasoning or evidence for your positions, as well as the specific ethical principles that relate to the question. Next, meet as a group in advance of the class debate to discuss answers to each question, and to develop a consensus (general agreement). Come to class in a speaking frame of mind, with a plan for responding to each question that is consistent with the consensus reached by your group.

Audience: Speak to the general public and the national press, but assume that both are educated in the scientific principles that underlie genetic engineering. (This is not the case, in reality.) Speak with authority rather than as a subordinate to the instructor. (Remember that the instructor is playing the role of the national press.)

Format and Rules of the Debate:

The debate format roughly parallels those used in many of the presidential debates. The moderator will guide the discussion. A question (issue) will be presented for discussion, following by a three-minute session for one panel to address the question. Following this, the other panel will have three minutes to respond (a rebuttal). After both panels have presented their arguments, there will be a three-minute period of open discussion, in which panelists discuss the points raised in the first two sessions. The moderator may interject at any time for clarification, or enforcement of the format or rules.

The rules that apply to panelists are as follows.

- **Support your positions with reasoning or facts** (this is the most important rule)
- Address the comments of the previous speakers before changing the question
- Don't interrupt: respond only when the speaker has finished
- Confront issues, not people (No *ad hominem* attacks)
- Comments to no more than one minute per response (Do not monopolize discussion)

Questions for Debate:

- Who is responsible for regulating the development of GM applications by Genovation? Why?
- Who is responsible for any harmful consequences of GM applications by Genovation? Why?
- Genovation is developing GM corn that is enriched with protein because it contains several chicken genes. Is this product justifiably for sale to humans? Why?
- Many people have raised concerns about Genovation's development of GM and pathogenic human viruses, for the claimed purpose of understanding infectious diseases. Should this be allowed to continue? Why?
- Many people have raised concerns about Genovation's recruitment of human egg donors for creating embryonic stem cells. Should this be allowed to continue? Why?
- Genovation is developing a technique to convert a genetically male zygote into a female embryo. Will the ability to choose a baby's sex become popular and accepted in our society? Why?
- Many new technologies have been failures. Why should the public embrace GM organisms, and genetic engineering?
- Stockholders own Genovations, and this ownership is transferable through trading in the stock market. Does this fact have any impact on the kinds of research activities that should be permitted for the company?
- Should legislation of new developments in GM technology involve voting by the general public? Or should legislative decisions be based only on the advice of experts in the technologies? Why?

Criteria for Evaluation:

Coordination of Discussion with Panel Members (20 points)

How well did the panel make use of allotted time periods?
Did panelists present consistent arguments (positions) for about issues?

Individual Contribution to Discussion (30 points)

How well did you ask questions or make points that facilitated discussion?
How well did you respond to discussion from the other panel?
How well did you follow the rules for the debate?

Absences or Tardiness: Since this event cannot be reproduced, there will be no make-up arrangements for absences or tardiness.