



Online Ethics Center  
FOR ENGINEERING AND SCIENCE

# Undergrad Student Discussion - Synthetic Biology

## Description

Part of the Genomics, Ethics, and Society course, this undergraduate-level scenario looks at issues of genomics and synthetic biology.

## Body

**Directions: Read the following scenario to prepare for the discussion.**

*Imagine there's a group of scientists working to create a synthetic organism, assembled by BioBricks, to be used as a biosensor to detect arsenic in groundwater used for drinking - a particular problem in Bangladesh. What are the main social and ethical issues that this research might pose? What considerations do you think would have to be taken into account (including risks, benefits and cultural concerns) before releasing such a synthetic organism into the Bangladesh environment? Do you think such an organism should ever be created or released?*

**In this discussion forum, create or respond to a thread discussing the risks and benefits, and other social and ethical issues, that you think conducting this research and releasing the resulting synthetic organism into the environment raises. At some point in your response, you should say whether you think such a synthetic organism should ever be released into the environment. We expect lively discussion, not an essay, and it is OKAY to change your views more than once during the discussion, or to stick to your original views throughout the discussion. Post your brief initial entry on the FIRST DAY so that everyone can respond to others' ideas**

throughout the discussion. You should contribute at least three times to the discussion. The [undergraduate grading rubric](#) explains what we're looking for in this discussion: good writing quality, clarity and relevance, a response on the first day of discussion, then a collegial exchange with other members of the discussion; your posts should show knowledge and understanding of the readings, and you should try to develop an argument for which you provide support, and that engages critically and thoughtfully with the course materials.

[Continue to Graduate Student Discussion](#)

## **Rights**

Use of Materials on the OEC

## **Resource Type**

Case Study / Scenario

Instructor Materials

## **Topics**

Emerging Technologies

Risk

## **Discipline(s)**

Synthetic Biology

Genetics and Genomics

Life and Environmental Sciences