

Survey: synthetic biology and DNA technologies

This informal survey has been compiled by students in the iGEM (International Genetically Engineered Machines) team Pretoria_UP at the University of Pretoria. It is intended to probe the knowledge of synthetic biology and biotechnology in our communities, and does not constitute any research or data capture performed on behalf of the University. **You do not have to participate in this survey, and you do not have to answer all questions.** The results of this survey will be presented at the International Genetically Engineered Machines Competition, Boston, USA, 24-28 Sep 2015. No personal information will be recorded, and your answers will be kept anonymous. Please answer the questions truthfully. For more information on iGEM, visit www.igem.org.

1. How old are you? _____
2. What grade are you in? _____
3. What is the highest qualification of your parents?
 - A. Neither of my parents have their Matric
 - B. Matric (Grade 12)
 - C. Diploma (e.g. teacher)
 - D. Degree
 - E. Postgraduate (e.g. Honours, Masters, PhD)
 - F. I don't know or I prefer not to answer

Synthetic biology involves engineering novel biological products, pathways and organisms using DNA technologies. Often the DNA is “printed” or synthesized artificially.

4. From which source did you first find out about synthetic biology?
 - A. Television
 - B. Radio
 - C. Newspapers, books and magazines
 - D. Internet
 - E. iGEM survey

5. In your opinion, synthetic biology: (you can choose more than one answer)

- A. Will revolutionize medicine, agriculture and applied biology within my lifetime
- B. I think synthetic biology and DNA technologies are exciting but I don't know what to expect in the future
- C. Will not affect me directly
- D. Is ethical, but should be carefully regulated
- E. Is unethical or wrong, and should be banned
- F. I am afraid that it will be abused (e.g. bioterrorism, warfare, engineering "super" viruses)

Optional: If you answered D, E or F for question 5, explain your concerns:

6. Would you make use of synthetic biology products?

- Yes
- No
- I don't know

7. In the following section, indicate which products you may or may not support:

7.1. Novel vaccines produced with synthetic DNA (e.g. anti-HIV vaccine, anti-malaria vaccine)

- Yes
- No
- I don't know

7.2. Headache tablet where the active ingredient (aspirin) was produced by genetically engineered yeast grown in a contained laboratory

- Yes
- No
- I don't know

7.3. A genetically modified bacterium that can clean up oil spills in the ocean

- Yes
- No
- I don't know

8. Do you think that the public is sufficiently informed and understands advances made in synthetic biology?

- Yes, they know enough to decide if they support it or not
- No, they need to learn more in order to make informed decisions
- I'm not sure

9. Which field do you think is the most important in terms of focusing future synthetic biology research? Tick only one box.

- Agriculture (e.g. to produce more food, enhance nutrition, combat pests and diseases)
- Medicine (e.g. vaccines, treatment of cancer, TB etc)
- Computer science (e.g. biological computers, efficient data storage)
- Environmental science (e.g. cleaning up heavy metal waste in mining dumps)
- We should not continue with synthetic biology research

10. "Synthetic biology can be used to improve the lives of South African citizens."

- A. I strongly agree
- B. I agree
- C. I neither agree nor disagree
- D. I disagree
- E. I strongly disagree

End of survey

Thank you