



Online Ethics Center  
FOR ENGINEERING AND SCIENCE

## Resources

### Description

Part of unit 2 of the [Course on Genomics, Ethics, and Society](#), this is a bibliography of recent news articles, academic articles, websites, videos and other resources on ethics and synthetic biology.

### Body

## News stories on Synthetic Biology/Microorganisms/Biofuels

[Synthetic biology: article in the Atlantic](#) - This Atlantic story from 2014 is a cross between a news story and a discussion article on synthetic biology, in particular in relation to developing a regulatory framework for food. There's an interesting debate implicit here about whether "naturalness" concerns the origin of something or the composition of something.

[Slate article: "Build a pet dinosaur or your perfect child"](#) - A rather dramatic article in Slate on the possible future of synthetic biology.

[Dec 2014 article from the New Yorker "Synthetic life after GMOs"](#) - Article discusses synthetic biology and iGEM.

[Creation of artificial enzymes reported: Dec 2014](#)

# Websites of Relevant Individuals and Institutions

[Craig Venter Institute Website](#)

[Synthetic Biology Institute UC Berkeley](#)

[The Hastings Center synthetic bio site](#)

[Imperial College London Centre for Synthetic Biology and Innovation](#)

## Links to Commentaries, Papers and Policy Statements

[IAP Statement on Realising Good Governance of Synthetic Biology](#) - This is an important report on the governance of synthetic biology, published in 2014, which has been commented on by a number of important figures including the Executive Secretary on the UN Convention on Biological Diversity (CBD) (who posts links to relevant CBD material here too).

[Link to the Cartagena Protocol on Biosafety](#) - "*The Cartagena Protocol on Biosafety to the Convention on Biological Diversity* is an international agreement which aims to ensure the safe handling, transport and use of living modified organisms (LMOs) resulting from modern biotechnology that may have adverse effects on biological diversity, taking also into account risks to human health. It was adopted on 29 January 2000 and entered into force on 11 September 2003" (From web page linked to here: this is an important document.)

["Synthetic biology and the ethics of knowledge"](#) - Paper in the Journal of Medical Ethics in 2010 by Thomas Douglas and Julian Savulescu (both from the Oxford Uehiro Centre for Practical Ethics) arguing that the misuse of knowledge from synthetic biology in warfare or terrorism is the greatest ethical concern it presents.

["Synthetic Biology and the Conservation of Nature: Wicked Problems and Wicked Solutions"](#) - This paper, published in PLOS Biology in 2013 by Redford, Adams and Mace, links to our unit on genetics and conservation, and concerns the engagement likely to take place in the future between the synthetic biology community and the biodiversity conservation community.

[Hastings Center resources](#) - A whole load of different resources here on ethics and synthetic biology from a project funded by the Sloan Foundation.

## Links to useful videos

[Watch me unveil "synthetic life" \(Craig Venter\)](#) - Craig Venter announces the release of the first self-replicating synthetic cell.

[Creating life: The ultimate engineering challenge \(from Equinox Graphics\)](#) - Documentary following a team of undergraduates as they prepare for the annual iGEM competition.

[Programming life: The revolutionary potential of synthetic biology \(from Discover Magazine\)](#) - A panel of experts talk about synthetic biology.

[Decoding synthetic biology \(by Sheraz Sadiq\)](#) - A basic introduction to research in synthetic biology, including discussion of artemisinin.

[Invasive bacteria becomes biofuels \(NBC News\)](#) - Basic introduction to synthetic biology, featuring biologist Steven Hutcheson (University of Maryland).

[Ecopolis: Biofuel \(Science Discovery\)](#) - Basic introduction to biofuels.

[Synthetic biology explained \(animated discussion by James Hutson\)](#) - Animated introduction to synthetic biology.

[Back to the Genomics, Ethics, and Society Course](#)

### Rights

Use of Materials on the OEC

### Resource Type

Instructor Materials

**Topics**

Emerging Technologies

Risk

**Discipline(s)**

Synthetic Biology

Genetics and Genomics

Life and Environmental Sciences