Public Engagement with Science: Synthetic Biology

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Biology's Brave New World

The Promise and Perils of the Synbio Revolution

By Laurie Garrett

In May 2010, the richest, most powerful man in biotechnology made a new creature. J. Craig Venter and his private company team started with DNA and constructed a novel genetic sequence of more than one million coded bits of...

The Risks and Rewards of Synthetic Biology

In the beginning, Craig Venter 'created life' in a lab. Can the eternal clash of science and ethics...

Right about now, it would be great if we could release into the Gulf of Ajiens a sort of bug that did nothing but eat pools of oil and dig up it into harmless smaller bits. Meanwhile, we'd power the distant regions with microbes that swallow gas droplets of seaweed and spout fuel, so we'd no longer need to pump holes in the bottom of the Gulf in the first place.

Such is the promise of synthetic biology - which, according to the people who have tried to explain it to me, is basically a marketing term for all kinds of research in which scientists tinker with biological bits.

A Powerful New Way to Edit DNA

BY ANDREW POLLAK

Beyond GMOs: The Rise of Synthetic Biology

Genetically modified organisms today usually have just one engineered gene. Scientists now want to create organisms with whole new gene clusters.

If We Create Life, Who Will Control It?

September 17, 2016

Marcelo Gleiser
Public Engagement with Science

- A multi-directional dialogue (not a lecture)
- Incorporates varied perspectives
- Listens to and respects the public
- Addresses not only benefits but also potential limits, perils, pitfalls of science and technology
- Informs conversation with scientific evidence
- Responds to societal issues and concern
PUBLIC ENGAGEMENT WITH SCIENCE: A Visual Model

**CONTRIBUTE**
Diverse methods and fields
Process of “developing knowledge”

**MEMBERS OF THE PUBLIC**

**CONTRIBUTE**
Individual motivations and interests
Social and community contexts
Cultural contexts

**CAN OFFER INSIGHTS ABOUT**
Process, discoveries, and people issues
Relevance
Nature of science

**CAN OFFER INSIGHTS ABOUT**
Public interests, questions, and needs
How to communicate relevance
Societal impacts of science

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**ENGAGEMENT**
Two-way (may be asynchronous)
Mutual learning (reflective, situational)
Format aligned with audience

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**PRACTITIONERS**

**RESEARCHERS AND EVALUATORS**
Study the Interactions

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**Matchmaking** / **Expertise and research** / **Support and resources**
Venue / Training / Connect scientists and public
Clear, Concise Communication for Conversations and Activities
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Want to join Trellis?
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Questions? Ideas?

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