

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. Cue the eternal clash of science and ethics

By Nancy Gibbs | Monday, June 28, 2010

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Right about now, it would be great if we could release into the Gulf of Mexico a vat of bugs that did nothing but eat gobts of oil and digest it into harmless smaller bits. Meanwhile, we'd power the cleanup vessels with microbes that swallow grass clippings or seaweed and spit out fuel, so we'd no longer need to punch 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

TECHNOLOGY

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.

policy

If We Create Life, Who Will Control It?

SEPTEMBER 17, 2014 9:06 AM ET

MARCELO GLEISER

Synthetic biology

And man made life

Artificial life, the stuff of dreams and nightmares, has arrived
May 20th 2010 | From the print edition [F3 Like](#) (242) [Tweets](#) (36)



TO CREATE life is the prerogative of gods. Deep in the human psyche, whatever the rational pleadings of physics and chemistry, there exists a sense that biology is different, is more than just the sum of atoms moving about and reacting with one another, is somehow infused with a deeper, more vital essence. It comes as a shock, then, that man

SCIENCE

U.S. Bioethics Commission Gives Green Light to Synthetic Biology

By ANDREW POLLACK DEC 16, 2010

HEALTH

A Powerful New Way to Edit DNA

By ANDREW POLLACK MARCH 3, 2014

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YORGOS NIKAS. WELLCOME IMAGES VIA WELLCOME IMAGES/FICKR (CC BY-NC-ND 2.0)
A human embryo that has begun to implant in the uterus.

Chinese paper on embryo engineering splits scientific community

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What a fascinating story! I found it interesting as some aspect of it reminded me of the conflict in Gaza ...

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The Most [Listen](#) [Commented](#)

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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

SCIENTISTS

MEMBERS OF THE PUBLIC

CONTRIBUTE

Diverse methods and fields
Process of “developing knowledge”



CAN OFFER INSIGHTS ABOUT

Process, discoveries, and people
Issues
Relevance
Nature of science

ENGAGEMENT

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

CONTRIBUTE

Individual motivations and interests
Social and community contexts
Cultural contexts



CAN OFFER INSIGHTS ABOUT

Public interests, questions, and needs
How to communicate relevance
Societal impacts of science

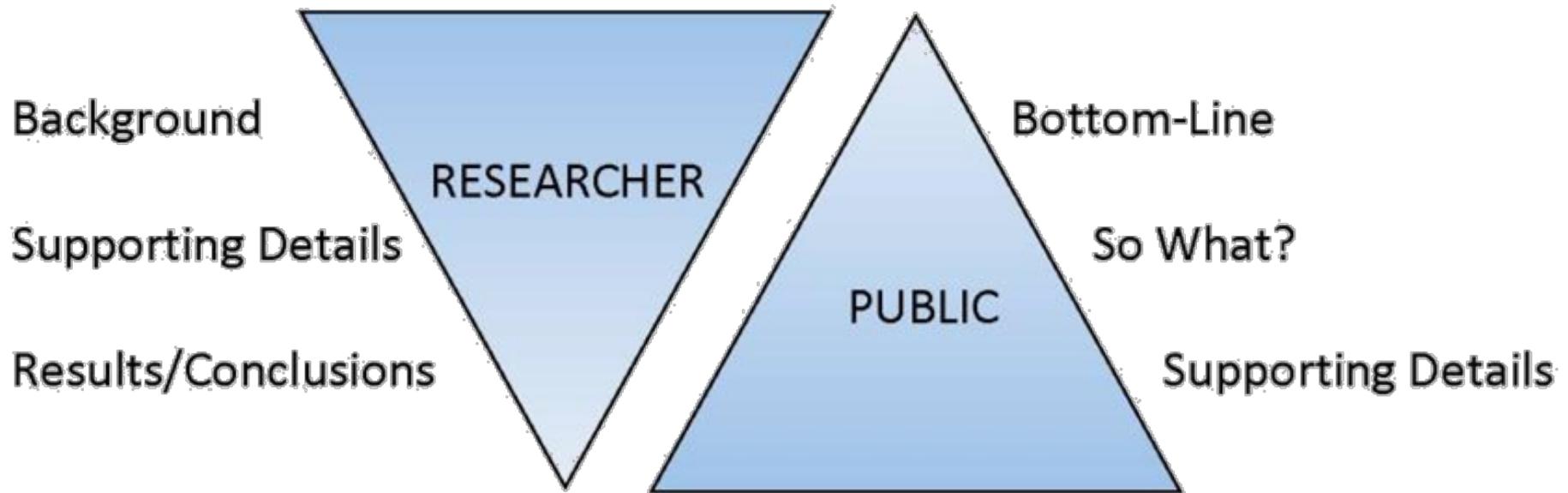
Matchmaking / Expertise and research / Support and resources
Venue / Training / Connect scientists and public

PRACTITIONERS

RESEARCHERS AND EVALUATORS

Study the Interactions

Clear, Concise Communication for Conversations and Activities



Clear, Concise Communication for Conversations and Activities





Want to join Trellis?
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Questions? Ideas?

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