

# Biological Futures

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**in a GLOBALIZED WORLD**

A joint initiative of:

- Center for Biological Futures, Fred Hutchinson Cancer Research Center
- Simpson Center for the Humanities, University of Washington

UW project team:

- PI: Alison Wylie, Philosophy and Anthropology
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- Program Coordinator: Suzanne E. Long, Simpson Center
- Website: <http://tiny.cc/biological-futures>

# A two-year pilot project...

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The 20th century and first years of the 21st have seen staggering increases in biological knowledge, and increasing worldwide use of that knowledge to manipulate and build living systems.

synthetic biology, genomics, global health, Roger's examples

The goals:

- to foster better thinking about these issues
  - to build collaborative research partnerships between social science/humanities scholars and practicing scientists
  - to design an innovative & integrated research ethics and STSS curriculum
  - to construct a web-portal that provides access to dispersed STSS and ethics/policy/equity resources
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# Biological Futures in a Globalized World: 2011-2013 plans

An initiative of the Center for Biological Futures, Fred Hutchinson Cancer Research Center, and the Simpson Center for the Humanities, University of Washington

## STSS\* Activities

building research capacity

### *Biweekly colloquium series*

"Sustainability, Stewardship..." - alternating between the Simpson Center and CBF/FHCRC  
- Mondays, 4:00-5:30 pm  
- beginning Fall 2011

### *Research Consortia*

*UW faculty summer fellows*  
- weekly consortia meetings  
- project incubator  
- course development  
- review partnerships w/scientists

### *Lecture series*

- two visiting speakers a year on Biological Futures issues  
- audio and video recording of public lectures & workshops

### *Summer Institute*

- 2012 regional STSS institute on Biological Futures themes

## Research Ethics / Integrity

training better thinkers

### *Research ethics training inventory and program development*

Postdoctoral and graduate fellows  
- identification of best practices  
- assessment of training needs  
- development of pilot courses, training modules and workshops

### *Research Ethics symposium*

- UW faculty lectures and workshops  
- video and/or audio archive

## Curriculum Initiatives

STSS educational resources

### *STSS graduate training*

- topical micro-seminars on research consortium projects  
- interdisciplinary graduate seminars: core STSS and research ethics/integrity  
- Graduate School interdisciplinary committee status for STSS Network  
- proposal for STSS certificate

### *Undergraduate training*

Danz-style courses on Biological Futures and research ethics/integrity  
- Honors College courses  
- Bothell IAS-STS courses

## Web Projects

outreach & infrastructure

### *Biological Futures website*

- local events: news, notices,  
- visiting speakers: podcasts, video links, commentaries  
- in-house colloquia: excerpts and bibliographic resources  
- research consortia: work in progress repositories

### *Integrated STSS web portal*

- clearinghouse for STS resources  
- RSS feeds from cognate fields: calls for papers / conference notices / publication features

### *STSS digital media workspace*

- work in progress repositories  
- regional calendars  
- project-specific collaboratories  
- course material archive  
- online publication venue  
- a monthly blogger digest of Biological Futures news & views

## PROJECT THEMES

### *better thinking / training / public engagement on Biological Futures issues*

- virtue ethics: reconceptualizing values adequate to the challenges posed by generationally deferred / large-scale impacts of biotechnology
- stewardship: a critical and comparative assessment of stewardship ideals in environmental ethics, natural and cultural resource management
- evidence in use: analysis of the meta-expertise and cognitive/social norms required to bring mixed evidence to bear on complex problems
- deliberative decision making: jointly empirical and conceptual analysis of best practices

\* Science, Technology and Society Studies (STSS)

# Summer Research Consortium: 2011-2012

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## UW Fellows

- ❑ Leah Ceccarelli – the metaphor of the scientific frontier
- ❑ Steve Gardiner – responsibilities to future generations
- ❑ Gwen Ottinger – expert accountability and ethics
- ❑ Matthew Sparke – biological citizenship & globalization

## CBF Fellows

- ❑ Gaymon Bennett – ethics at SynBERC
  - ❑ Meg Stalcup – global health and security
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# Colloquium series

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Biweekly working sessions organized :

- a cross-field comparison of challenges posed by innovation and emerging technologies, with a focus on normative issues: research ethics/integrity, equity issues, science policy and governance
  - an assessment of how these challenges are understood within different ethical, normative frames
  - a forward-looking assessment of how best to engage these issues:
    - what do we need to know empirically to address them?
    - how does empirical investigation bear on normative questions about the values that inform our responses to them?
    - how can ethicists and STSS scholars most effectively engage these issues?
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# Colloquia in process

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## **Fall 2011: *Emerging Issues in Biological Futures***

- **October 20:** Matt Sparke (Geography, UW), Leah Ceccarelli (Communication, UW), Gaymon Bennett (CBF Fellow, FHCRC)
- **November 7:** Celia Lowe (Anthropology, UW), Meg Stalcup (CBF Fellow, FHCRC), Luke Bergmann (Geography, UW)

## **Winter 2011: *Beyond Compliance***

- **January 23:** Ethics Maxims for the Biological Sciences  
Gaymon Bennett and Meg Stalcup (CBF/FHCRC)
  - **January 30:** What Biological Futures Issues concern practicing scientists, and how can CBF/BFGW help address them?
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# ....in prospect

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## Speakers

- **February 13:** Dave Guston (ASU), “Anticipatory Governance”
- **February 14:** Innovation Squared: Why innovations in technology require innovations in ethics (UW Bothell), Gwen Ottinger
- **February 27:** Colin Koopman (Oregon), “Problems vs principles”

## Topics

- **Consent:** bio-banks, public health risks, patient care ...
  - **Risk and Harm:** global & generationally extended
  - **Precautionary Principles:** geoengineering, nanotechnology ...
  - **Stewardship:** cultural heritage, public health genetics ...
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# Research ethics: beyond compliance

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- Build research ethics into graduate and advanced undergraduate training in the (non-medical) sciences so it is integral to the core curriculum of these fields – tailor it to the needs of specific research communities
  
  - But at the same time, situate local issues and practices in a broader context:
    - Draw on STSS expertise to contextualize ethics issues
    - Cultivate comparative understanding of cross-cutting issues
    - Develop the analytic and conceptual skills necessary to address them
  
  - Consider three overlapping domains
    - Responsible conduct of research (e.g., research integrity, trust-building)
    - Broader impact and societal context (e.g., risk analysis, democratic science)
    - Values in scientific practice (e.g., choices in climate change modeling)
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# Process going forward

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## 1) Inventory:

- Web sleuthing and consultation
- Drilling down: GPD / student / faculty survey

## 2) Consultative program design

## 3) External consultation

- Model programs: catalyst training / train the trainers
- EESE : international, emerging technologies, pedagogical

## 4) Pilot Projects: Spring 2012

- “Science and Ethics” undergraduate course
  - “Risk” seminar
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# Ethics resource inventory

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- What resources for research ethics/research integrity training are already in place in your department or faculty?
    - How are the ethics training/education requirements met?
    - What other kinds of ethics training are required, for faculty and postdocs as well as students?
  
  - Beyond compliance:
    - Who's incorporating ethics into their courses and research?
    - Do you run, or know of, any topical workshops or colloquia on ethics issues?
    - Who's interested? Who should we talk to?
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# Pilot projects

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- What ethics training or education would be useful, what's most needed, and what's likely to be effective?
    - Format / level: formal stand-alone courses/seminar, colloquia, workshops, training modules on specific issues
    - Issues / topics: what do students most need to know? What issues are postdocs and colleagues dealing with? What's most relevant in your field / your research?
    - Constituency: should modules aim to include researchers of different disciplines? Or focus on members of the same (sub-)discipline?
  - Are there examples of relevant and effective ethics training / education / programming elsewhere that you'd recommend we take a look at / that might be a good model?
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# Survey questions

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1. What formal ethics training (i.e., courses, on-line modules, required trainings) have you received as part of your education at UW? Was this training offered within your home department or outside of it?
  2. What informal ethics discussions (i.e., brown-bag discussions, one-off workshops, interactions with mentors) have you been involved in during the course of your education at UW? Did these take place within your home department or outside of it?
  3. What ethics issues are most pressing in your field? Are they addressed in the formal ethics training you've had? Are they addressed in an informal fashion?
  4. What kind of ethics training and/or resources would you like to have in addition to/instead of what's currently available? What do you think an ideal ethics training program would look like?
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