

# EEB 5894 Writing Compelling Proposals

## The Funding Environment

Types of support:

Scholarships, fellowships, grants, contracts

Sources of support:

Intramural, extramural

Industry

Foundation

State/Region

Federal

NGO/Nonprofit

TABLE 40. Federal obligations for basic research in life sciences, and detailed field: FY 2011  
(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences <sup>a</sup>	Environment al biology	Medical sciences	Other life sciences
All agencies	15,373,391.2	546,976.3	8,277,103.7	434,588.2	5,085,503.6	1,029,219.3
Departments						
Department of Agriculture	832,312.0	534,354.5	116,668.9	170,786.6	10,491.0	11.0
Agricultural Research Service	520,444.3	404,311.6	36,256.1	70,642.6	9,234.0	0.0
Foreign Agricultural Service	171.9	171.9	0.0	0.0	0.0	0.0
Forest Service	67,045.3	23,234.5	7,672.9	36,126.9	0.0	11.0
Grain Inspection, Packers, and Stockyards Adminis	6,690.6	6,690.6	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	237,960.0	99,946.0	72,740.0	64,017.0	1,257.0	0.0
Department of Commerce	8,575.8	0.0	8,575.8	0.0	0.0	0.0
National Institute of Standards and Technology	8,575.8	0.0	8,575.8	0.0	0.0	0.0
Department of Defense	213,186.7	0.0	79,238.6	7,928.1	91,788.1	34,231.9
Defense Advanced Research Projects Agency	41,543.5	0.0	8,468.8	0.0	33,074.7	0.0
Department of the Air Force	20,886.5	0.0	10,552.6	0.0	0.0	10,333.9
Department of the Army	57,070.4	0.0	20,639.4	0.0	35,423.0	1,008.0
Department of the Navy	68,987.1	0.0	32,994.1	7,928.1	6,212.3	21,852.6
Other defense agencies <sup>b</sup>	24,699.2	0.0	6,583.7	0.0	17,078.2	1,037.4
Department of Energy	374,021.7	0.0	374,021.7	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	376.3	0.0	376.3	0.0	0.0	0.0
National Nuclear Security Administration	242.5	0.0	242.5	0.0	0.0	0.0
Nonproliferation and Verification	242.5	0.0	242.5	0.0	0.0	0.0
Office of Science	373,402.8	0.0	373,402.8	0.0	0.0	0.0
Department of Health and Human Services	12,770,470.4	0.0	7,041,241.5	0.0	4,752,428.3	976,800.6
Ctrs. for Disease Control and Prevention	23,266.8	0.0	0.0	0.0	22,850.8	416.0
Health Resources and Services Administration	2,563.4	0.0	0.0	0.0	2,563.4	0.0
National Institutes of Health	12,744,640.2	0.0	7,041,241.5	0.0	4,727,014.2	976,384.5
Department of Homeland Security	48,257.0	12,093.0	24,725.8	0.0	0.0	11,438.2
Science and Technology Directorate	48,257.0	12,093.0	24,725.8	0.0	0.0	11,438.2
Department of the Interior	14,221.5	0.0	8,378.4	5,628.1	0.0	215.0
U.S. Geological Survey	14,221.5	0.0	8,378.4	5,628.1	0.0	215.0
Department of Justice	4,180.9	0.0	4,180.9	0.0	0.0	0.0
Office of Justice Programs	4,180.9	0.0	4,180.9	0.0	0.0	0.0
Department of Veterans Affairs	225,502.1	0.0	0.0	0.0	225,502.1	0.0
Other agencies						
Environmental Protection Agency	65,207.9	294.8	46,242.9	18,301.7	121.5	247.0
National Aeronautics and Space Administration	38,012.4	234.0	24,440.8	1,889.5	5,172.5	6,275.6
National Science Foundation	690,847.7	0.0	506,952.5	183,895.3	0.0	0.0
Smithsonian Institution	88,595.0	0.0	42,436.0	46,159.0	0.0	0.0

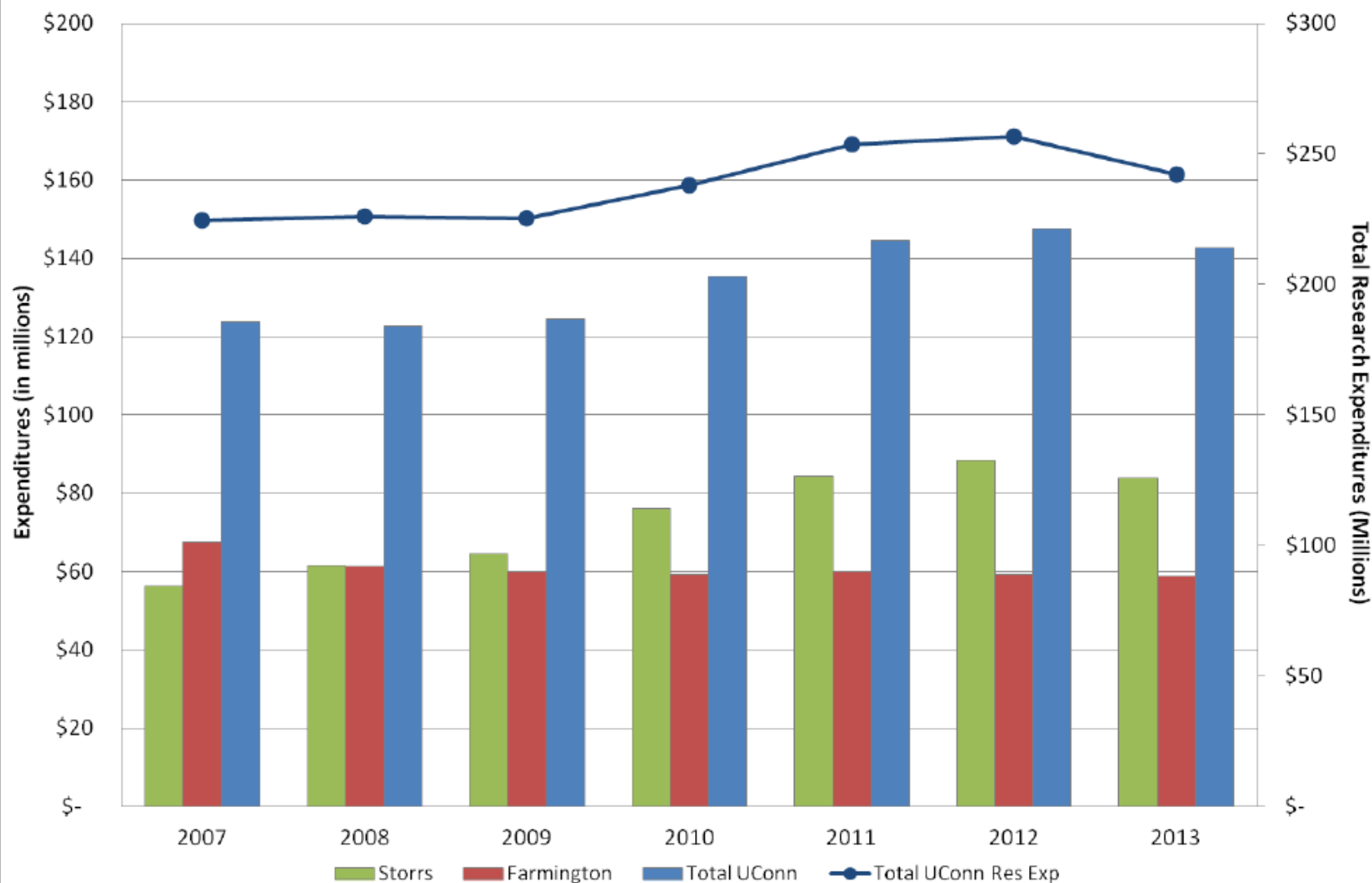
<sup>a</sup> Excluding environmental biology.

<sup>b</sup> As of the FY's 2011-13 survey, Other defense agencies displays aggregated data of Department of Defense subagencies engaged in

NOTES: Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See appendix C for additional notes associated with the agencies listed in this table.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FY's 2011-13.

## University of Connecticut Federal Research Expenditures By Campus, FY2007- FY2013



“Since 2005 EEB has received ~\$21 million in external grant funds of ~\$28 million awarded (~75.6 million when allocations to co-PIs at other institutions are included), with a dramatic increase of 62% in external grant revenue between 2008 and 2012. The Division of Environmental Biology (DEB) at the National Science Foundation has been the primary source of external support for research activities in the Department since 2005, funding most of the approximately 170 projects. Faculty have been supported by awards from the various incarnations of 11 DEB programs: Assembling the Tree of Life, Biotic Surveys and Inventories, Dimensions in Biodiversity, Ecological Statistics and Geography, Ecological Studies, Ecological Biology, Long Term Ecological Research, Long Term Research in Environmental Biology, Partnership for Enhancing Expertise in Taxonomy, Planetary Biodiversity and Inventory, Population Biology, and Systematic Biology. Additional support has come from 7 other NSF Divisions: Biological Infrastructure, Major Research Instrumentation, Integrated Organismal Systems, International Science and Engineering, Earth Sciences, and the “Cross Cutting” divisions of Dynamics of Coupled Natural and Human Systems and Information Technology Research.” *EEB 8-year program review, self study (2012)*

Faculty:	N	Avg grant	Total funds
Industry	7	\$41,870	\$293,090
State or Regional Agency	22	\$118,469	\$2,606,320
Foundations and NGOs	19	\$328,834	\$6,239,304
International	5	\$284,800	\$1,274,000
NSF	54	\$546,389	\$29,505,004
Federal non-NSF	33	\$283,640	\$9,360,116

Graduate Students:	N	Avg grant
Foundations and NGOs	28	
Societies	34	
NSF DDIG	15	\$12,262
Other Federal	11	

<http://grad.uconn.edu/financial-resources/external-funding-opportunities/>

Crowdsourcing science: <https://experiment.com/>

## Context Statement

National Science Foundation  
Directorate for Biological Sciences (BIO)  
Division of Environmental Biology

Context Statement  
Preliminary Proposal  
Evolutionary Processes Cluster

Preliminary Proposals submitted to the Evolutionary Processes Cluster are evaluated by panel only review using the two NSF review criteria of intellectual merit and broader impacts as described in the NSF Grant Proposal Guide (NSF 10-1). Additional criteria are applied to preliminary proposals submitted in response to targeted solicitations, as specified in the program announcement for those solicitations.

The 472 preliminary proposals submitted for the 9 January 2012 deadline were reviewed by 2 panels held in Arlington, VA on March 21-23 and April 11-13. Panel summaries are brief synopses written by the panelists of the salient points emerging from the panel's discussion of your proposal. The reviews and panel summaries used in the decision making process are available on the FastLane 'Proposal Status' screen.

The panels assigned each of the preliminary proposals to one of two categories. The number and percentage of all preliminary proposals placed in these two categories were:

Invite (full proposal) 79 17%  
Not Invite 393 83%

## Context Statement

National Science Foundation  
Directorate for Biological Sciences (BIO)  
Division of Integrative Organismal Systems (IOS)  
Physiological and Structural Systems Cluster  
Integrative Ecological Physiology Program

Preliminary Proposals (pre-proposals) submitted to the Physiological and Structural Systems Cluster were evaluated by panel review using the two NSF review criteria of intellectual merit and broader impacts as described in the NSF Grant Proposal Guide ([www.nsf.gov/pubs/policydocs/papp/gpg\\_index.jsp](http://www.nsf.gov/pubs/policydocs/papp/gpg_index.jsp)) as well as any additional review criteria listed in the FY 2014 IOS Core Program Solicitation (<http://www.nsf.gov/pubs/2013/nsf13600/nsf13600.pdf>).

During Spring 2014, a combination of on-site and virtual panels of the Physiological and Structural Systems Cluster reviewed pre-proposals submitted for the January 2014 deadline. Your pre-proposal was discussed by the Integrative Ecological Physiology Program, which reviewed 288 proposals. The panels placed 13% of the proposals in the High Quality category, 43% in Medium Quality, 31% in Low Quality, and 13% in Not Competitive. These categories should be considered as the panels advice to the Program Directors; they are not specific recommendations regarding invitations.

# Biological Science: An Investment in America's Future

AIBS factsheet

## Consistent Funding Needed for Biological Research

Federal support for peer-reviewed grant programs that fund biological research are vital components of the nation's research enterprise. Awards are made via a competitive process and proposals are peer-reviewed by scientists, resulting in the most promising research being funded.

The National Science Foundation Biological Sciences Directorate (BIO) provides about 66% of extramural, competitive grant funding for basic biological and environmental research conducted at our nation's universities and nonprofit research centers.

Funding for BIO, however, has not kept pace with the demand for research grants. Despite the large number of highly competitive and potentially transformative grant proposals submitted to BIO, 82% of applications were rejected in 2013.

Sustained federal investment is required to prevent a buildup of unfunded, but competitive grants. Funding is especially constrained because of budget sequestration, resulting in fewer research grants being awarded. Please help to ensure that federal investments in the biological sciences are sustained.

Awards for extramural, competitive research have stagnated at other agencies.

The success rate at the National Institutes of Health (NIH) was 17% in 2013.

Only 11% of proposals were funded within the U.S. Department of Agriculture's Agriculture and Food Research Initiative.

Budget sequestration has further eroded federal support for science.

*"Scientific discovery takes far more than the occasional flash of brilliance – as important as that can be. Usually, it takes time and hard work and patience; it takes training; it requires the support of a nation. But it holds promise like no other area of human endeavor."*

*- President Barack Obama*

## **EEB 5894 Seminar, Fall 2014 Writing Compelling Proposals**

### **General Information**

**Faculty Coordinator:** Dr. Eric T. Schultz; PharmBio 205B, 486–4692; [eric.schultz@uconn.edu](mailto:eric.schultz@uconn.edu);  
office hours: M 11-12, Tu 10-11, and otherwise by appointment or just stop by

**Meeting Time:** Tu 1230-1320, TLS 171B (Bamford Conference Room)

### **Content Objectives**

This seminar course is designed to get you in touch with your inner persuader.

### **Process Objectives**

We will develop an approach to preparing proposals that includes peer review.

### **Organization**

### **Grading**

The course is graded S/U.

### **Schedule**

Week	Date	Subject
1	8/26	Focusing plans for the semester, <u>The</u> funding environment, 1. Where EEB funding comes from; types of funding; sources and trends in funding.
2	9/2	<u>The</u> funding environment, 2. Introduction to Pivot searches. We will meet in Library EC 2, on Level 2
3	9/9	
4	9/16	
5	9/23	
6	9/30	
7	10/7	No meeting
8	10/14	
9	10/21	
10	10/28	
11	11/4	
12	11/11	
13	11/18	