# National Science Foundation
# Directorate of Biological Sciences
# BIO

Chris Sanford, Program Director

BIO: Division of Biological Infrastructure

NSF Grants Conference
Pittsburgh PA Nov. 14 & 15 2016

# Overview

- Orientation - Directorate of Biological Sciences
- BIO Science, our mission and priorities
- BIO Divisions/Clusters/Programs
- Information

# Demystifying NSF & the BIO Directorate

Arlington, VA (current)

Alexandria, VA (2017)

National Science Board

Director

Inspector General

Staff Offices

Biol. Sci.

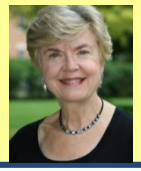
Computer Inf. S & E

Engineering Sci.

Geosciences

Math & Phys Sci.

Social, Behav. & Eco.



Education & HR

Budget, Finance & Award Management

Information Resource Management

# NSF Big Ideas

National Science Board

Director

Inspector General

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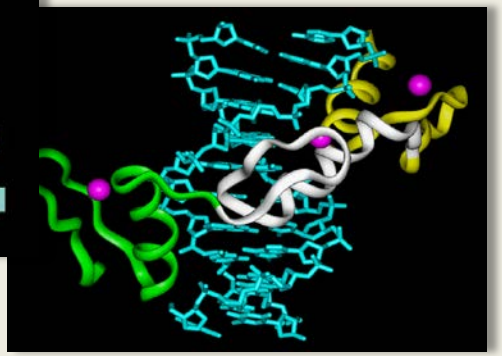
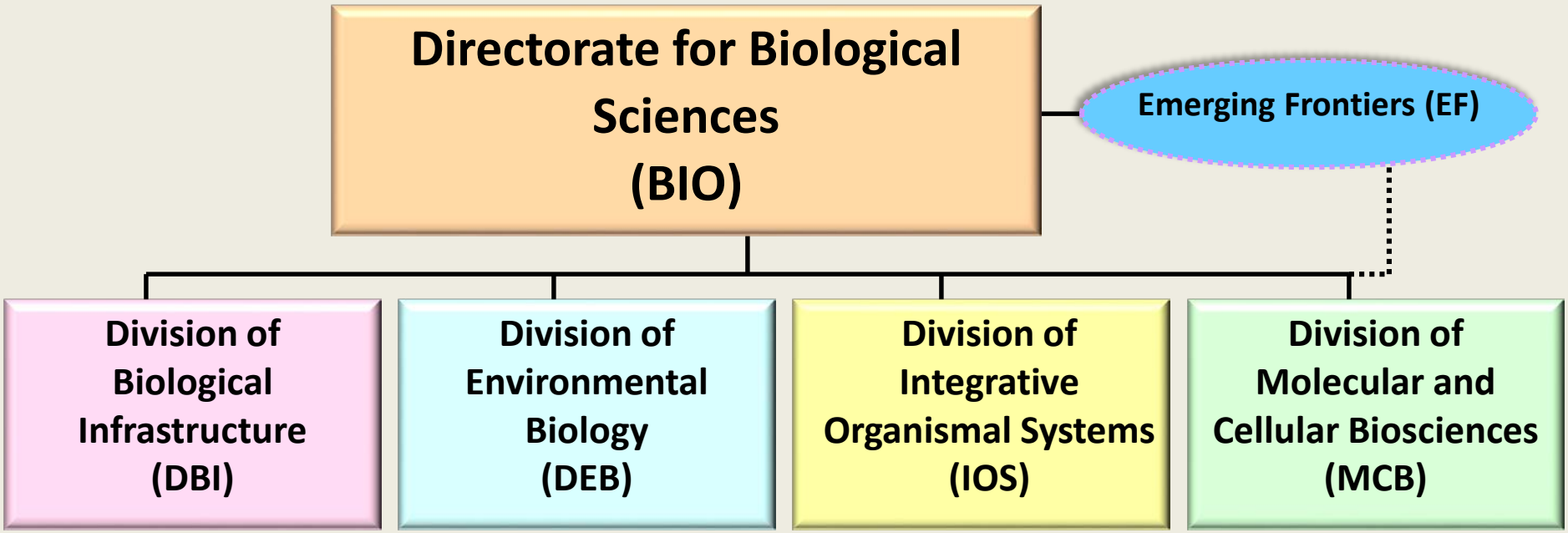
# The BIO Mission

Enabling discoveries to understand life



# Bio Divisions/Clusters/Programs




http://www.nsf.gov/bio/about.jsp#orgchart

# Division of Emerging Frontiers (EF)

- *Multidisciplinary* research and networking activities that arise from *disciplinary* research
- Current Programs
  - Next Generation Networks For Neuroscience (NeuroNex)
  - MacroSystems Biology and Early NEON Science
  - Origin of Life Ideas Lab

# Core Divisions of BIO

## Division of Biological Infrastructure (DBI)

- Human Resources
- Research Resources

## Division of Environmental Biology (DEB)

- Ecosystem Science
- Evolutionary Processes
- Population and Community Ecology
- Systematics & Biodiversity Science

## Division of Integrative Organismal Systems (IOS)

- Behavioral Systems
- Developmental Systems
- Neural Systems
- Physiological & Structural Systems
- Plant Genome Research Program

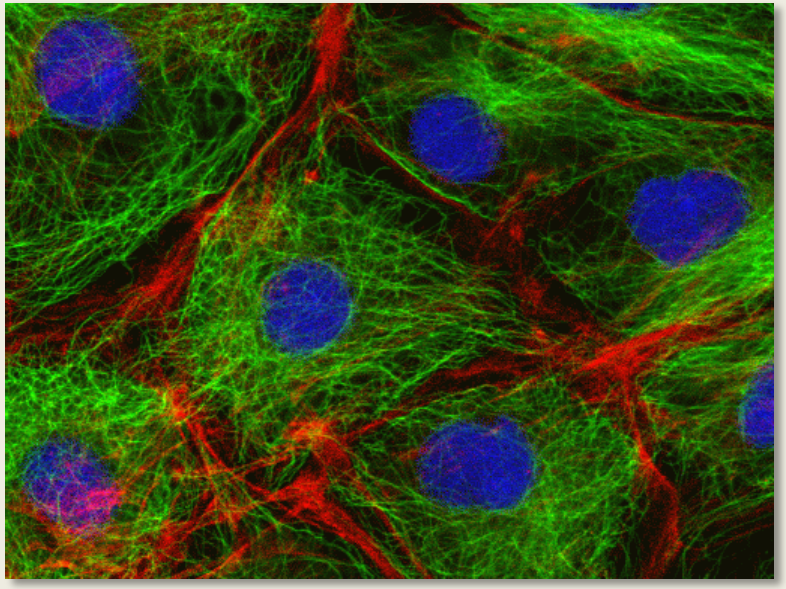
## Division of Molecular and Cellular Biosciences (MCB)

- Cellular Dynamics and Function
- Genetic Mechanisms
- Molecular Biophysics
- Systems and Synthetic Biology

# Division of Molecular and Cellular Biosciences

- Research aims to understand life processes at the molecular, subcellular and cellular levels.
  - Cellular Dynamics and Function
  - Genetic Mechanisms
  - Molecular Biophysics
  - Systems and Synthetic Biology

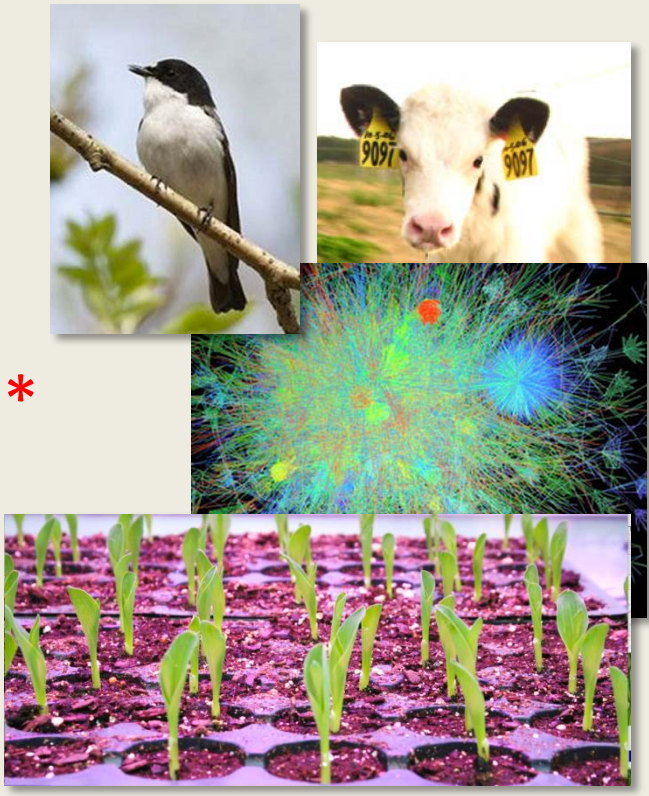
- Current solicitation: NSF 13-510
  - One deadline per year



http://www.nsf.gov/pubs/2013/nsf13510/nsf13510.htm

# Division of Integrative Organismal Systems

- Supports research aimed at improving our understanding of organisms (plant, animal, microbe) as integrated units of biological organization.
  - Behavioral Systems*
  - Developmental Systems*
  - Neural Systems*
  - Physiological and Structural Systems*
  - Plant Genome Research Program*
  - Plant-Biotic Interactions (16-511)
- Solicitations:

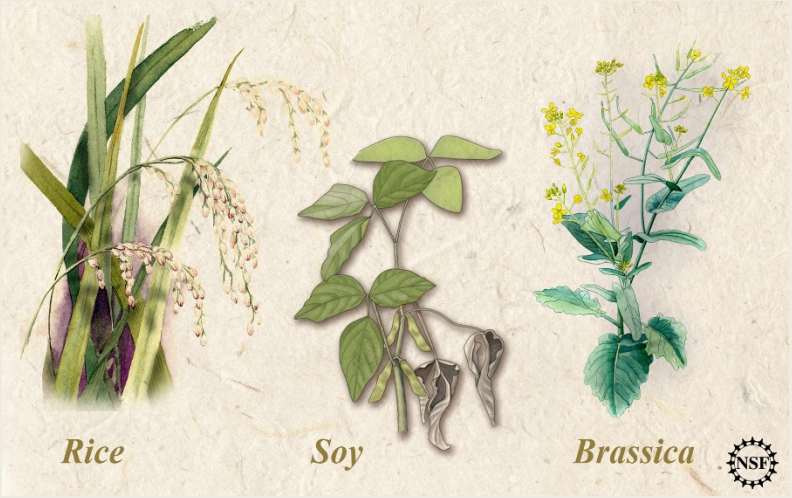


* IOS Pre and full proposals: NSF 17-508
https://www.nsf.gov/pubs/2017/nsf17508/nsf17508.htm
* IOS/PGRP Full proposal only - accepted anytime: NSF 16-614
https://www.nsf.gov/pubs/2016/nsf16614/nsf16614.htm

# IOS: Plant Genome Research Program

The National Plant Genome Initiative (NPGI) started in 1998

- Focus on plants & processes of agricultural importance
- Supports developing tools, resources, training and hypothesis-driven basic research on a *genome-wide* scale
- Requirements: rapid release and full sharing of all data and tools.




https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf16614

# Division of Environmental Biology

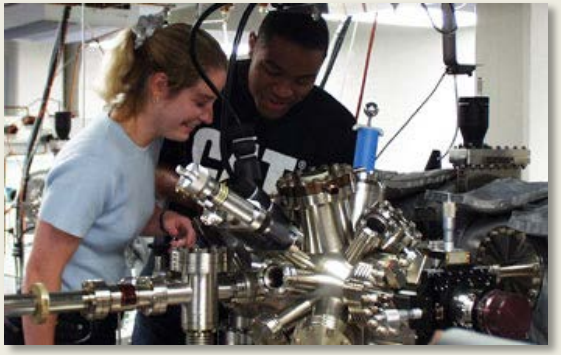
- Supports fundamental research on the *origins, functions, relationships, interactions, and evolutionary history* of populations, species, communities, and ecosystems.
  - Ecosystems Science
  - Evolutionary Processes
  - Population and Community Ecology
  - Systematics and Biodiversity Science

- Solicitation: NSF 17-512
  - Preliminary Proposals Required

https://www.nsf.gov/pubs/2017/nsf17512/nsf17512.htm

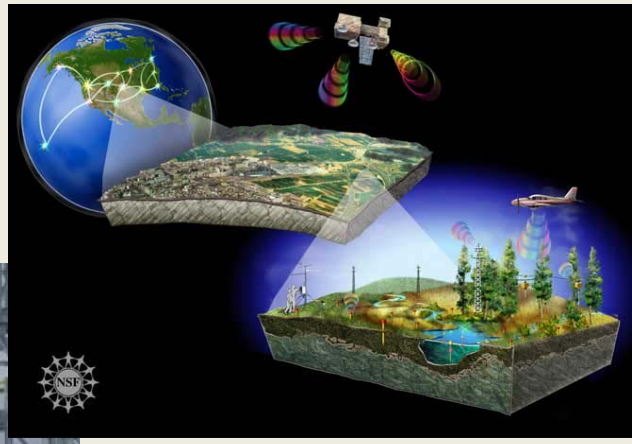
# Division of Biological Infrastructure

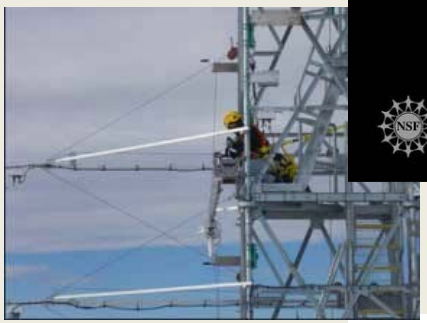
- Research Resources Cluster
  - Advances in Biological Informatics
  - Collections in Support of Biological Research
  - Improvements in Facilities, Communications, and Equipment at Biological Field Stations and Marine Laboratories
  - Major Research Instrumentation
  - Instrument Development for Biological Research



# Division of Biological Infrastructure

- Human Resources Cluster
  - Postdoctoral Research Fellowships in Biology (PRFB)
  - Research Coordination Networks (RCN)
  - Research Experiences for Undergraduates (REU)
- Centers
  - NEON
  - Synthesis Centers
  - Science and Technology Centers

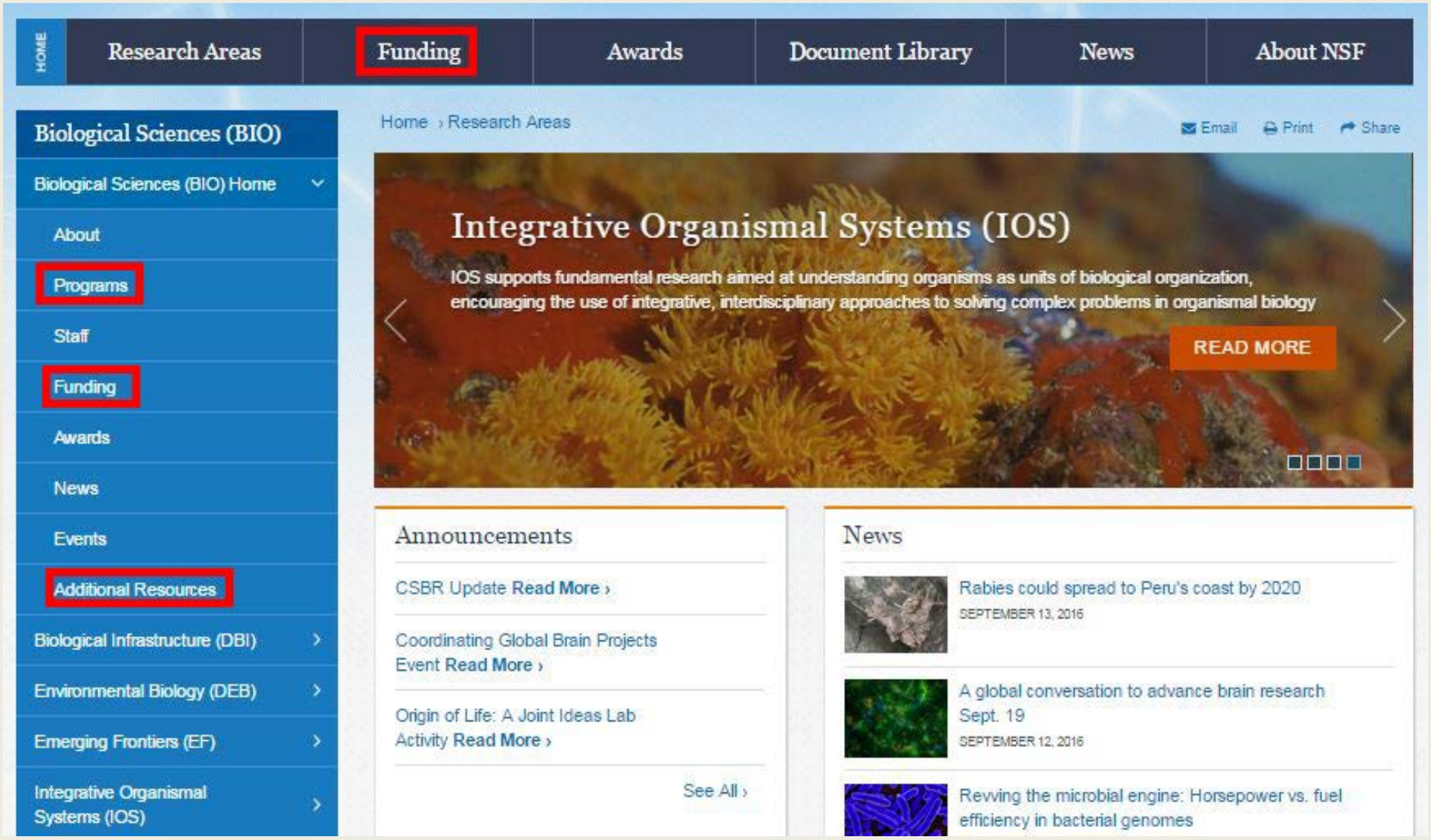




NESCent transitions to TriCEM June 2015.
This site is maintained for reference only.

NESCent
National Evolutionary Synthesis Center

# Resources for Information



# Or…..

Follow us on social media!

www.nsf.gov/social

BIO blogs: www.nsfbio.com

BIO Buzz

DBInfo

DEBrief

MCB Blog

IOS InFocus

Call your Program Officer!

If you need to get in touch with me:

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