



**Agenda**  
**BIO Advisory Committee (AC) Hybrid Meeting**  
**Directorate for Biological Sciences (BIO)**  
**National Science Foundation**  
**Room 3430**

YouTube Links (for observers):

<https://new.nsf.gov/events/spring-2024-advisory-committee-meeting-directorate>

**Day 1**            **May 8, 2024**

**9:15 AM**            **Members arrive and/or log on for virtual participation**

**9:30 AM**            **Introductions, Agenda Review, and Logistics**

Welcome

Michael Ibba, Chair, BIO AC

Approval: BIO AC Minutes from Fall 2023 Meeting

Material<sup>1</sup>: Minutes of Fall 2023 Meeting

**9:45 AM**            **Update from BIO**

Susan Marqusee, Assistant Director (AD), BIO

**10:45 AM**            **Break**

**11:00 AM**            **Continuing the Discussion on Bioeconomy, spurred by the Bioeconomy Executive Order (EO)**

Introduction of the EO, its requirements, and NSF actions.

Theresa Good, Division Director, Molecular and Cellular Biosciences (MCB), and Chair of the NSF Cross-Directorate Bioeconomy Coordinating Committee

**11:05**            **Catalyzing Across Sectors to Advance the Bioeconomy (CASA-Bio)**

Overview and Status Report

CASA-Bio is a collaborative activity involving representatives of federal agencies, industry, and non-profits. The goal is to bring life to the vision of the Bioeconomy

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<sup>1</sup> Documents available on BIO AC External SharePoint site:

<https://extsharepoint.nsf.gov/bio/BIOadvisorycommittee/SitePages/Home.aspx>

Executive Order and identify areas for collaboration across the five broad EO themes, e.g., climate change solutions, food and agriculture innovation, supply chain resilience, human health, and cross-cutting areas to enable advances in the other themes.

[Brent Miller, Science Advisor, Office of the AD in BIO](#)

**11:20 Data for the Bioeconomy**

Introduction (5 min)

Review of data-relevant requirements of the Bioeconomy EO

[Theresa Good](#)

**11:25 Presentation (20 min)**

“Vision, Needs, and Proposed Actions for the Data for the Bioeconomy Initiative: A Report from the Interagency Working Group on Data for the Bioeconomy”  
Overview and high-level recommendations.

[Sylvia Spengler, Program Director, Information Integration and Informatics \(III\), Directorate for Computer and Information Science Engineering \(CISE\); and Co-Chair of the Interagency Working Group on Data for the Bioeconomy](#)

**11:45 Presentation (20 min)**

Overview of BIO support for Data Resources and Synthesis Centers

[Jim Deshler, Acting Division Director, Division of Biological Infrastructure, BIO – overview of BIO investments](#)

[Matthew Kane, Program Director, Ecosystem Science, Division of Environmental Biology \(DEB\), BIO – overview of Environmental Data Science Innovation and Inclusion Lab \(ESIIL\)](#)

[Manju Hingorani, Program Director, Genetic Mechanisms, MCB, BIO – overview of National Synthesis Center for Emergence in the Molecular and Cellular Sciences \(NCEMS\)](#)

**12:05 Q&A (25 min)**

**12:30 PM Lunch Break** (everyone finds their own outside of NSF)

**2:00 PM Long Term Ecological Research Decadal Review Follow-up**

Prioritization of Recommendations from the LTER Program Director Working Group.

[Betsy von Holle, Program Director, Division of Environmental Biology, and Chair of the LTER Working Group](#)

- 2:20 PM**      **Response to DEB COV report**  
Highlights from BIO's response to the COV Report.  
 Allen Moore, Division Director, DEB
- 2:40 PM**      **BIO Funding Metrics**  
Presentation (15 min)  
 Update on impact of no deadlines to BIO submissions and funding rates.  
 Rachel Shackleford, Analyst, Division of Integrative Organismal Systems, BIO
- 2:55      Q&A (20 min)  
 Moderator: Barbara Beltz, BIO AC
- 3:15 PM**      **Break**
- 3:30 PM**      **Bio Funding and Outreach in EPSCoR states**  
Overview and relationship to requirements of CHIPs and Science Act and relevance to Goal 1 of the NSF Strategic Plan.  
 Michelle Elekonich, Deputy Division Director, Integrative Organismal Systems
- 3:35      Presentation of Data (15 min)  
 Rachel Shackleford, Analyst, IOS
- 3:50      BIO Outreach Strategies and recent efforts (15 min)  
 Ishita Mukerji / Cliff Weil, Program Directors, MCB  
 Anna Allen, Program Director, IOS; and Charlotte Roehm, Program Director, DBI
- 4:05      Q&A (25 min)  
 Moderator: Kennedy Wekesa, BIO AC
- 4:30 PM**      **Preparation for Visit with the Office of the Director (OD) Leadership**  
 Michael Ibba, AC Chair
- 5:30 PM**      **Adjourn**
- 6:30 PM**      **Dinner**

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**Day 2**      **May 9, 2024**

**9:15 AM**      **Members arrive and/or log on for virtual participation**

- 9:30 AM**      **Intersections of AI and Biological Sciences Research**  
Panel Discussion -- Goals
- Provide brief primer on types of AI and introduce computationally focused programs of potential interest for BIO.

- Introduce the AI Executive Order, the National Artificial Intelligence Research Resource (NAIRR) pilot, and other NSF/OAC resources for democratizing access to AI.
- Discuss examples of opportunities for AI and machine learning to drive scientific discovery as highlighted in the ACCI report, “Opportunities in Artificial Intelligence and Machine Learning.”

**Moderator:**

Sri Raghavachari, Program Director, DBI, and BIO representative to NSF Working Group for AI Institutes

**Panelists:**

Michael Littman, Division Director, Division of Intelligent Information Systems, CISE

Katie Antypas, Head, Office of Advanced Cyberinfrastructure

(Tentative) Rommie Amaro, University of California-San Diego, Member - Advisory Committee for Cyberinfrastructure (ACCI)

**Material:** AI Executive Order ([fact sheet](#)); [report](#) from ACCI (above); AI x BIO White papers from National Security Commission on Emerging Biotechnology (<https://www.biotech.senate.gov/latest-work/>); AI in the Biological Sciences: Uses, Safety, Security, and Oversight (<https://crsreports.congress.gov/product/pdf/R/R47849>); Strengthening and Democratizing the U.S. Artificial Intelligence Innovation Ecosystem (<https://www.ai.gov/wp-content/uploads/2023/01/NAIRR-TF-Final-Report-2023.pdf>).

**Q&A/Discussion**

**10:30 AM Break for Transition to Breakout Rooms**

**10:40 AM AC member Breakout Groups – Opportunities and Bottlenecks for Advancing the intersections of AI and BIO**

Context: BIO AC members will discuss priority research areas that could advance the intersections of AI and BIO. A report-out on these discussions will occur in the next session.

Questions:

1. What AI opportunities can be leveraged to advance biological scientific discovery? What areas of biology are most ready?
2. What areas of biology are not yet ready? What kind of help is needed?
3. What obstacles must be overcome? What concerns do you have?
4. What roles could NSF/BIO play?

**11:40 AM Break for Transition Back to Main Room**

**11:45 AM Report out from Breakout Groups**  
Michael Ibba, AC Chair, moderates

- 12:30 PM**      **Lunch (on your own)**
- 1:30 PM**      **Update from Committee on Equal Opportunities for Science and Engineering (CEOSE)**  
Presentation. Overview of 2023 Report on Rural STEM.  
Suzanne Barbour, Dean of Graduate School, Duke University; and Chair of CEOSE
- 1:40      Q&A (10 min)  
Moderator: Tom Daniel, (Bio AC)
- 2:00 PM**      **Final prep for OD Leadership visit**
- 2:45 PM**      **Break**
- 3:00 PM**      **Meeting with OD Leadership**  
Karen Marrongelle, Chief Operating Officer  
Brian Stone, Chief of Staff
- 3:30 PM**      **Recap and Discussion of Topics for Spring 2024 Meeting**  
Michael Ibba, BIO AC Chair  
Susan Marqusee, BIO AD
- Thank you to Paul Turner who is completing his final term of service on the AC
- 4:00 pm**      **Adjourn**

### **Breakout Groups**

#### **Breakout 1 (Main Room 3430)**

Mike Ibba  
Tom Daniel  
Matthew Hahn  
[Katie Antypas]

#### **Breakout 2 (Room 3080)**

Hank Bart  
Erich Grotewold  
Gail McLean (v)  
Maria Uriarte (v)  
Pam Soltis  
[Michael Littman]

#### **Breakout 3 (Room 3090)**

Barbara Beltz  
Wallace Marshall (v)  
Rob McClung

Paul Turner (v)  
Kennedy Wekesa  
[Rommié Amaro (v)]