Directorate for Biological Sciences
HBCU - Excellence in Research
Virtual Office Hour

Welcome to the Virtual Office Hour. We will begin soon.

Please submit questions via the Chat button available to you on Zoom, set to “Everybody”.

Directorate for Biological Sciences HBCU - Excellence in Research

Virtual Office Hour

Program Directors in attendance today:

- Division of Biological Infrastructure – Amanda Simcox (asimcox@nsf.gov)
- Division of Environmental Biology – Andrea Porras-Alfaro (aporrasa@nsf.gov)
- Division of Integrative Organismal Systems – Jodie Jawor (jjawor@nsf.gov) & Diane Jofuku Okamuro (dokamuro@nsf.gov)
- Division of Molecular and Cellular Biology – Phoebe Lostroh (clostroh@nsf.gov)

HBCU Excellence in Research

Now a stand-alone solicitation HBCU-EiR (NSF 20-542)

- Letter of intent still required – submit to the HBCU-EiR solicitation by July 23rd, 2020
- Full proposal – submit to the HBCU-EiR solicitation by October 6th, 2020
  - Consider supplements* when you are creating your budgets (more in a bit)

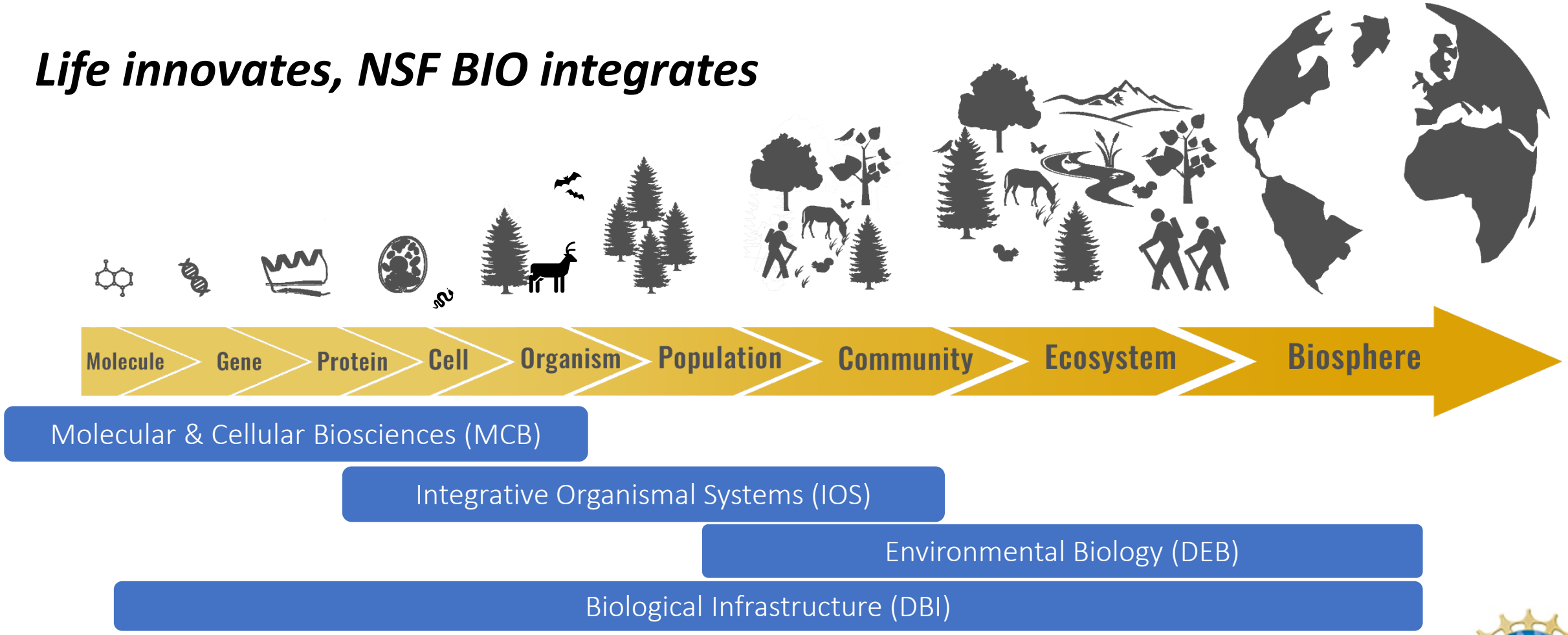
Review process:

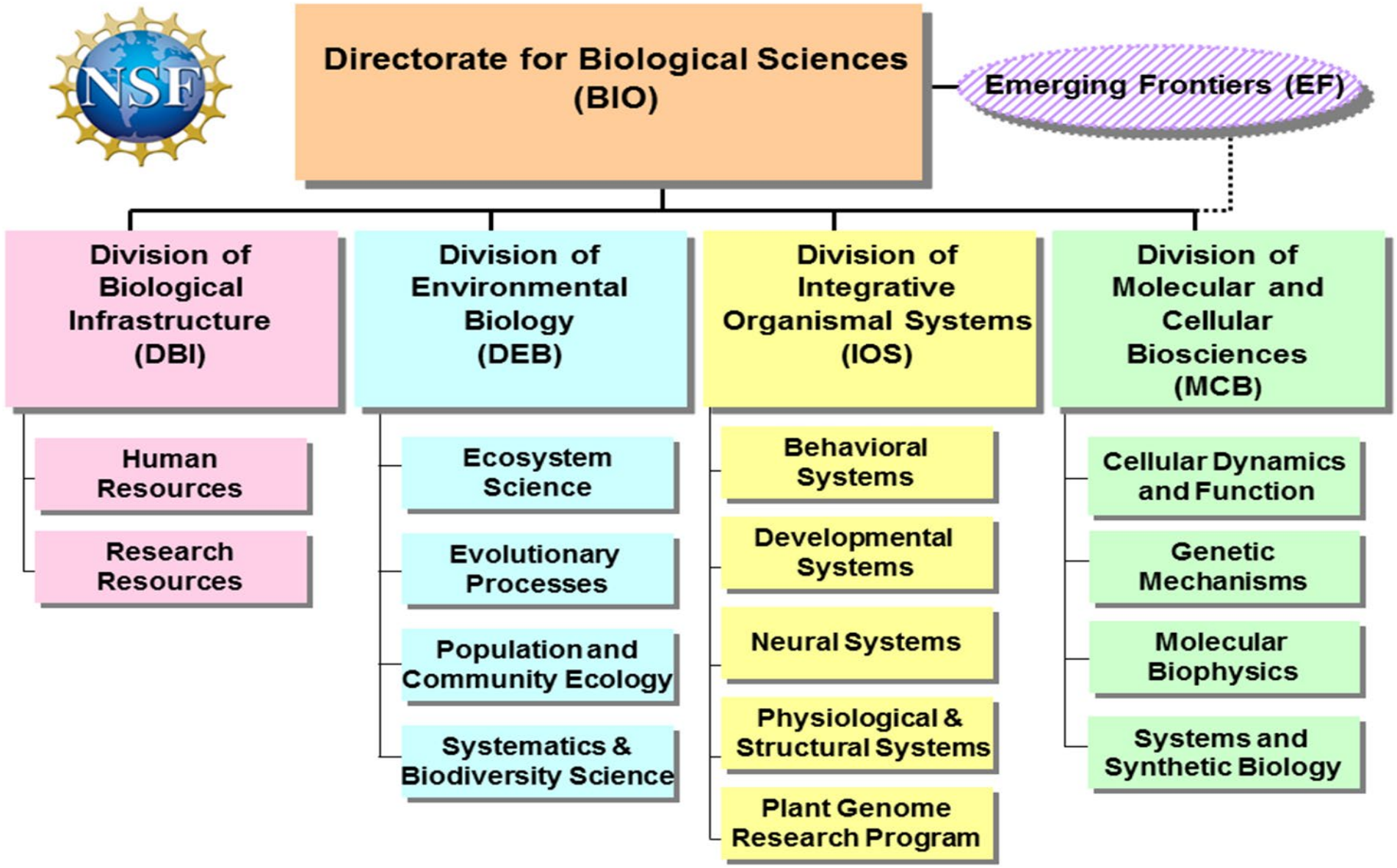
- Investigators identify a program outside of Education and Human Resources (where HBCU-EiR is housed) for review of their work
- Proposals are transferred to identified program for topic review
- Program officers in review programs suggest recommendation or decline of the work based on reviews and their own reading of the proposal
- If funding is recommended this is provided through HBCU-EiR

It is strongly recommended that you communicate with a program officer in a potential review program prior to submitting your proposal (good) and even before submitting your letter of intent (better)

Four BIO Divisions: Biological Research Across Scales

Life innovates, NSF BIO integrates




Directorate for Biological Sciences (BIO)
Emerging Frontiers (EF)
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 Biological Infrastructure DBI

Human Resources

Supporting the training of next generation of scientists

- Research Coordination Networks in Undergraduate Biology Education (RCN-UBE)
- REU sites
- Postdoctoral Research Fellowships in Biology (PRFB)

REU Site:
Nanobioengineering
Alabama State University
Award: 1659166

Photo Courtesy David Campbell/Alabama State University

Research Resources

Supporting the infrastructure that makes science possible

- Innovation (IIBR)
- Capacity (ICB)
- Sustaining (SABI)
- Advancing Digitization of Biodiversity Collections
- NEON (National Ecological Observatory Network)

Budget Considerations

- Request what you need to accomplish the research you propose
  - Be sure that what you are asking for in the budget is commiserate with what you propose to do
- Supplements* - additional activities that used to be asked for separately, we like to see them from the start now
  - Research Experience for Undergraduates, Research Opportunity Awards, and Research Assistantships for High School Students
- The budget limits/guidance in the original EiR are no longer a thing
- Non-HBCU partners?
- Course ‘buy outs’?

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Future/Other Funding Opportunities to Think About

- Facilitating Research at Primarily Undergraduate Institutions (RUI) – NSF 14-579 – for investigators at Primarily Undergraduate Institutions
- Small Grants – unique DEB line (NSF 20-502) – total budget $200K, full research projects – just need a smaller budget to achieve
- Faculty Early Career Development Program (CAREER) (NSF 20-525)
  - Pre-tenure faculty. **Note** – deadline change for 2020 to Aug. 11th
- Transitions to Excellence in Molecular and Cellular Biosciences Research (Transitions) – NSF 20-505 MCB funding opportunity
- Enabling Discovery through Genomic Tools (EDGE) – NSF 20-532
  - IOS funding opportunity

Tips for Writing Competitive Proposals

- Start with describing the big picture, the fundamental question or issue
  - Describe how achieving the goals of your project will lead to progress on the big picture question; your science must be compelling and relevant to fundamental issues
- Experimental plan must be well-matched to hypotheses
  - Are the methods and design the best to test the hypotheses?
- Preliminary data are consistent with the hypotheses
- Newer methods generally require preliminary data or demonstration they work in your hands
- Have you considered alternative experimental outcomes?
- Develop a plan for convincing and significant broader impacts activities

NSF Merit Review Criteria

- Intellectual Merit:
  - Potential for advancing knowledge in/across fields
  - Qualifications of the investigators
  - Creativity and originality
  - Organization of the ideas/experiments
  - Access to resources
  - Potentially transformative research?
- Broader Impact:
  - Promoting teaching, training, and education
  - Enhancement of infrastructure for research and education
  - Community resources and outreach
  - Participation of underrepresented groups
  - Benefits to society

NSF Merit Review Criteria

Try to think like a reviewer might, and think of someone not completely familiar with *your* work – are you covering everything in **Intellectual Merit**?

What Applicants want to convey

- Present a NEW idea
- Explain the expected results and alternative plans
- What you will do, risk mitigation
- Demonstrate your qualifications
  - Preliminary Data
  - Publications

What Reviewers look for

- Advancing the field: is it a big or little step in science?
- Will the negative results be important too?
- Can the applicants do the project?

NSF Merit Review Criteria

Try to think like a reviewer might, and think of someone not completely familiar with *your* work – are you covering everything in **Broader Impacts**?

What Applicants want to convey

- Present a clear, integrated plan.
- Document a history of outreach/impact.
- Show who you will impact and how.
- Describe how you will know it works.

What Reviewers look for

- Connected to the research?
- Can it be executed?
- Targeting an appropriate goal/group?
- Will it have an impact and *how will the PI know*?

What Makes a Proposal Competitive?

- Potential for high impact
- New, original ideas
- Focused, feasible project plan
- Articulated knowledge of subject area, published relevant work
- Experience in essential methods or approaches, and/or collaborator expertise
- Sound scientific rationale
- Realistic amount of work; sufficient detail; critical approach (knows the pitfalls)