



Meeting of the BIO Advisory Committee Summary Minutes November 8-9, 2001

THURSDAY, NOVEMBER 8TH

Welcome: Dr. Mary E. Clutter, Assistant Director

Director Dr. Clutter introduced a new member of the BIO AC, Dr. Thomas E. Brady., Dean College of Sciences, University of Texas, El Paso.

Remarks, Approval of Minutes: Dr. Ellen Goldberg, Chair

The minutes of the April 2001 meeting were approved by voice vote. Dr. Goldberg noted that one goal of this meeting is to assist BIO in developing the new biology of the 21st century.

Government Performance and Result Act (GPRA) Assessment: Dr. Joann Roskoski, Ms. Sonya Mallinoff, & BIO AC Government Performance and Results Act (GPRA) Working Group

Dr. Roskoski reviewed the assessment process which made use of Committee of Visitors (COV) reports, program annual reports and other documents to produce the FY 2001 BIO GPRA Performance Report. The BIO AC Working Group was charged to rate the BIO directorate's achievement against the FY 2001 NSF performance goals. .

BIO FY 2001 Committees of Visitors:

Committee of Visitor (COV) reports were summarized by each BIO AC representative to a COV, as noted below, and approved by the BIO AC.

- Division of Environmental Biology, Long-Term Ecological Research, Dr. Leonard Krishtalka
- Division of Integrative Biology and Neuroscience, Division Review, Dr. Gwen Jacobs
- Division of Molecular and Cellular Biosciences, Cell Biology Cluster, Dr. Norine Noonan
- Plant Genome Research Program, Dr. Burt Ensley

Incentives and Consequences: Dr. George Jones (ad hoc discussion)

Dr. Jones led a discussion about using both incentives and consequences to address diversity

issues at NSF and within the research/educational establishment.

BIO GPRA Performance Evaluation: Dr. Norine Noonan

The BIO AC endorsed the BIO self-assessment and rated the BIO directorate as successful in meeting the FY 2001 Performance Goals of NSF (People, Ideas and Tools). The report included the following comments and recommendations: (a) the issue of increasing diversity in science and engineering remains a large problem without easy solutions, and it is recommended that BIO consider this issue in consultation with the rest of NSF; (b) BIO funding has significantly advanced knowledge in areas not supported by other Federal agencies and catalyzed interagency work; (c) it is recommended that BIO implement COV suggestions as appropriate for increasing the use of criterion 2 by reviewers and principal investigators; and BIO is commended for achievement in the area of management and investment goals. The AC asked BIO to report back on its progress in implementing COV recommendations and to ensure that its programs continue to evolve with the fields they support.

BIO FY 2002 Budget Update: Dr. Mary Clutter

NSF received an increase of 8.4% over the FY 2001 current plan; BIO received an increase of 4.8% over the FY 2001 current plan

NSF Activities Update: Dr. Joann Roskoski

BIO participates in various NSF priority areas, including Biocomplexity in the Environment, Information Technology Research, Nanoscale Science and Engineering, and Learning for the 21st Century. BIO's priority areas include the Plant Genome Program and the 2010 Project.

Recruitment of Program Officers: Dr. George Jones

Issues discussed included (1) the effect of timing and career stage on an individual's decision to serve as a program officer; (2) ways to encourage recognition of service as a program officer so that the time away does not become an impediment to career advancement; (3) use of AC members to help with program officer recruitment; (4) engaging professional societies in recruitment and recognition; and (5) benefits of being a program officer (growth, broadened vision, administrative skills).

Current Issues - The New Biology: Dr. Mary Clutter

Biology has reached the point where new tools and information allow it to embrace an integrated as well a reductionist approach. As borders between disciplines have blurred, a New Biology, which is multidisciplinary, multidimensional, education oriented and information driven, has emerged.

Charge to Breakout Groups: Dr. Ellen Goldberg

The charge was to consider how to bring about the integration of reductionist and holistic biology. Additionally, the groups were to consider how NSF could implement the New Biology in order to better serve the scientific community.

FRIDAY, NOVEMBER 9TH

Future Business - Workshops - Grand Challenges: Dr. Leonard Krishtalka

A list of ten grand scientific challenges was presented, which Dr. Krishtalka suggested could be used as a blueprint for scientific planning, or in developing a budget. Dr. Clutter charged a working group to further develop a workshop on this idea. Because of the breadth of the challenges, other disciplines will need to be involved in the workshop.

Reports and Discussion from Breakout Groups - Enabling The New Biology

The AC formed breakout groups to discuss how BIO and NSF might best facilitate and enable the New Biology. There were exciting and interesting discussions on issues such as: (1) the need to support informatics, (2) mid-career training of biologists, (3) training biologists how to manage multidisciplinary teams, and (4) developing the infrastructure and institutional framework to support interdisciplinary work.

BIO AC Subcommittee on Program Officer Recruitment

The AC agreed to work with BIO to develop a plan to recruit the highest quality program officers and recommended that BIO work with the AC and the scientific community to determine future areas of needed expertise for program officers. Drs. George Jones (lead), Marvalee Wake and Norine Noonan agreed to serve on this subcommittee.

BIO AC Subcommittee for the New Biology

Drs. Larry Vanderhoef, Claire Fraser, Burt Ensley, James Collins and Vicki Chandler agreed to form a subcommittee to interact with and advise BIO on this topic, and then report back to the AC.

Future Business - Workshops - Roots of Cognition: Dr. Ellen Goldberg

The AC reviewed a draft proposal prepared by the Krasnow Institute for Advanced Study at George Mason University. The Institute will be advised to submit a formal proposal to NSF for consideration. Other Directorates such as SBE will be invited to participate in the review of the proposal.

FY 2002 BIO Committee of Visitors: BIO AC assignments are noted below:

- Division of Biological Infrastructure, Instrumentation Cluster, March 4-6, 2002, Dr. John Wooley
- Division of Environmental Biology, Ecological Studies Cluster, March 20-22, 2002, Dr. James Collins
- Division of Integrative Biology and Neuroscience, Physiology and Ethology Cluster, February 25-27, 2002, Dr. Thomas Brady
- Division of Molecular and Cellular Biosciences, Division Review, March 13-15, 2002, Dr. Kerri-Ann Jones

BIO AC voted to endorse position on foreign student visas

The AC drafted a memo to Dr. John Marburger, Director of the Office of Science and Technology Policy, regarding foreign student visas. The Committee acknowledged that there is an administrative tracking problem regarding foreign students that must be fixed. However, the committee also stressed the benefits of educating foreign students, e.g. enhanced vitality of US science from foreign students who remain, economic benefits resulting from the growth of science overseas when students return home, and the positive view of the US, its culture and

institutions, that foreign students often convey to their country upon their return.

BIO AC Activities - Long Term Ecological Research (LTER) Program 20-Year Review: Dr. Leonard Krishtalka

In extensive coordination with the community, the review committee developed nine issues to be addressed during the review. The final report will be presented at the April 2002 AC meeting.

BIO AC Activities - Environment - Report on the Advisory Committee on Environmental Research and Education (AC-ERE) Meeting: Dr. James Collins

The AC-ERE is developing a strategic planning document that focuses on : (1) research, (2) infrastructure, and (3) education/diversity. Speakers at recent AC-ERE meetings included E.O. Wilson and Simon Levin. In October 2001, NSF and the EC signed an Implementing Arrangement for Cooperative Activities in the areas of climate research, marine science and technology, seismic risk and hazards reduction, Arctic research and environmental biology. A similar agreement will be pursued with Japan.

WORKING LUNCH

Dr. Rita Colwell, Director, NSF

Dr. Colwell discussed the budget and NSF's role in the response to the events of September 11, 2001. The AC presented information on the New Biology and recruitment.

General Discussion:

A final discussion centered on the idea of NSF senior administrators visiting universities to meet with all NSF PIs and institutional representatives in order to encourage networking, recruit the next generation of researchers and program officers, and address diversity issues in the science and engineering workforce.

Future Meeting Dates:

Spring - April 25 - 26, 2002 Topic: Education

(Date changed after the meeting to accommodate schedule conflicts)

Fall - November 7-8, 2002

APPROVED

/S/ James P. Collins

May 2, 2002

James Collins, Acting Chair

Date

[Back to Meeting Agendas and Minutes Page \(.../advisory.jsp\)](#)

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