



BOARD OF SCIENTIFIC COUNSELORS

**SCIENCE TO ACHIEVE RESULTS (STAR)/GREATER RESEARCH OPPORTUNITIES (GRO)
FELLOWSHIP SUBCOMMITTEE**

Conference Call Summary

February 16, 2006

2:00 – 4:00 p.m. EST

Welcome

Dr. Clifford Duke, Subcommittee Chair

Dr. Clifford Duke welcomed the STAR/GRO Fellowship Subcommittee members and thanked them for their participation on this and the previous conference call. He then did a roll call of participants.

Dr. Duke provided an overview of the agenda, which included time for Ms. Lori Kowalski, the Designated Federal Officer (DFO) for the Subcommittee, to address administrative issues, including Federal Advisory Committee Act (FACA) procedures and logistics for the Subcommittee's upcoming face-to-face meeting to be held March 2-3, 2006; Ms. Becki Clark to provide an overview of the Office of Research and Development's (ORD) National Center for Environmental Research (NCER); and Ms. Stephanie Willett to provide details on the STAR and GRO Fellowship Programs. Dr. Duke discussed the formation of workgroups to facilitate discussion and writing of the Subcommittee's report. He stated that no members of the public had requested time to speak, but there was an opportunity for members of the public to make comments during the call.

Administrative Procedures

Lori Kowalski, Subcommittee DFO

Ms. Kowalski reviewed the FACA procedures that are required for all Board of Scientific Counselors (BOSC) Executive Committee and Subcommittee meetings. As DFO, she serves as the liaison between the Subcommittee and ORD. All meetings involving substantive issues, whether in person, by phone, or by e-mail, must be open to the public. This applies to all group communications that include at least one-half of the Subcommittee members. The Subcommittee Chair and the DFO must be present at all meetings. A *Federal Register* notice must announce all meetings at least 15 calendar days in advance of any meeting. Issues that are preparatory or administrative in nature are exempt from this requirement. The Subcommittee information has been entered into the federal docket management system (<http://www.regulation.gov>, Docket ID EPA-HQ-ORD-2005-0562).

Ms. Kowalski has worked with EPA officials to ensure that all appropriate ethics regulations have been satisfied; each Subcommittee member has filed a standard government financial

disclosure report. In addition, all Subcommittee members have completed the required ethics training.

Because Dr. Costel Denson provided a reference for a current STAR fellow applicant, he recused himself from discussing Charge Question 4 (STAR fellowship selection process and decision criteria) and the second part of Charge Question 5. It was determined that Dr. Denson can participate and provide comments on Charge Question 1 and fully participate in discussing the GRO Fellowship Program. Ms. Kowalski asked other Subcommittee members who discover potential conflicts of interest to inform her of them. Dr. John Adgate reminded Ms. Kowalski that he also had recused himself from participating in charge questions related to the STAR Fellowship Program during the first conference call.

Ms. Kowalski stated that this was the second BOSC STAR/GRO Fellowship Subcommittee conference call. Items would be discussed according to the stated agenda, and a summary of the call would be available to the public after certification by the Chair of the Subcommittee.

Ms. Kowalski noted that the Subcommittee members had received reference materials on a CD. Subcommittee members will receive additional hard copy materials prior to the upcoming face-to-face meeting. She will provide the Subcommittee members a new table of contents for their notebooks to reflect the additional material.

Receipts, Time Sheets, and Logistics for Face-to-Face Meeting

Lori Kowalski, Subcommittee DFO

Ms. Kowalski thanked the Subcommittee members for making their reservations for the upcoming meeting and noted that Subcommittee members should have received an electronic itinerary by e-mail. She reminded the Subcommittee members that the logistics sheet received via e-mail contains directions to the hotel.

Ms. Kowalski stated that three poster sessions during the March meeting will provide one-on-one interaction with ORD staff and STAR/GRO fellows. To comply with FACA requirements, a recap discussion must occur after each poster session. Subcommittee members will summarize key points from their one-on-one conversations with ORD staff and/or STAR/GRO fellows; these summaries will be included in the minutes for the meeting. The poster sessions are the only time these one-on-one technical discussions with ORD staff and the fellows can occur. A dinner is planned for March 2, which will be open to anyone attending the meeting; this is a social event and cannot include discussion of anything related to the meeting. Ms. Kowalski asked that the Subcommittee members bring to the face-to-face meeting their notebooks with reference materials, as well as their travel vouchers and homework sheets.

Dr. Duke then announced that Dr. John Hall, Chair of the Chemistry Department at Morehouse College, agreed to act as a consultant to the Subcommittee and would attend the face-to-face meeting. He reminded the Subcommittee members that Ms. Claudia Sturges Scott agreed to serve as Vice Chair of the Subcommittee.

Dr. Duke introduced Ms. Becki Clark and asked the Subcommittee members to hold questions until the end of each presentation.

Overview of the STAR/GRO Fellowship Programs

Ms. Becki Clark, Office of Research and Development, NCER

Ms. Clark noted that, on the previous conference call, Dr. Kevin Teichman provided an overview of EPA's ORD. She stated that her presentation would provide an overview of NCER. The Center was created in 1995 to help bring the best scientific expertise from the external research community into EPA decisionmaking. NCER's programs were patterned after the National Science Foundation's (NSF) grant programs, including the mentoring of new grants and creation of fellowship programs. Over the past 10 years, NCER has issued 233 Requests for Applications (RFAs) for research grants and awarded 2,281 grants and 1,372 fellowships with funding of more than \$970 million. The grants and fellowships were awarded to more than 900 institutions and have resulted in more than 6,500 scientific publications. The research focus areas supported by funding through grants, fellowships, and contracts include Particulate Matter, Global Change, Ecological Services, Human Health Research (including Children's Health and Tribal Centers), Endocrine Disrupting Chemicals, Computational Toxicology, Drinking Water, Economics and Decision Sciences, Pollution Prevention, Sustainability, Nanotechnology, and Exploratory Research.

Funding is distributed through the STAR Program, STAR and GRO Fellowships, the Experimental Program to Stimulate Competitive Research (EPSCoR, which provides grants to states), the Small Business Innovation Research (SBIR) Program, and congressionally directed research projects and centers. NCER has experienced some fluctuations in resources. During the past 2 years, there has been a decrease in research funding, with dramatic cuts to ecology research funding.

Dr. Gary Foley is the Director of NCER and the organization has three divisions. Ms. Clark is the Director of NCER's Environmental Sciences Research Division. NCER manages approximately 1,000 active research grants and fellowships and 70 SBIR contracts. Each year, the organization receives 2,500-3,200 applications and funds 250-300 new awards including STAR grants and STAR and GRO fellowships. There is significant cross-agency and interagency involvement in solicitation planning, writing, and review of the RFAs. These are competitive solicitations with an external programmatic peer review process and an internal relevancy review that includes regional and program office input.

The STAR Program is a unique program for a mission-oriented, regulatory agency. The grant process is driven by users of the research and supports both core and problem-driven research. The process is completely competitive and includes review by external peer review panels. The external funding is tightly aligned with EPA research needs, leverages other resources, and provides for significant cross-agency and interagency involvement. All of the research results are fully accessible to the public. NCER's peer review process is seen as exemplary, and the Center continues to explore ways to increase its efficiency. This year, NCER implemented the electronic submission of applications via <http://grants.gov>.

NCER has been successful in working with other entities—other federal agencies (e.g., the Department of Energy, the Department of Homeland Security, and the National Institute of Environmental Health Sciences) as well as national organizations (e.g., the American Chemistry Council and the American Water Works Association Research Foundation)—and is exploring

partnership possibilities with the European Union. Partnerships provide means for leveraging resources; in particular, federal partners provide funding dollars.

Ms. Clark offered several examples of the 2006 RFAs that correspond with the priority research areas. Subcommittee members may request the 2006 RFAs briefing book for a complete list. In addition to the STAR Graduate Fellowships and the GRO Graduate and Undergraduate Fellowships, NCER participates in the American Association for the Advancement of Science (AAAS) Fellowships, the American Schools of Public Health (ASPH) Fellowships, the Marshall Scholars Program, and the People, Prosperity, and the Planet (P3) Grant Awards Program. NCER also is starting an ORD Science Fair Web Site to involve ORD staff in judging and participating in school science fairs.

Congressionally directed funds provided in 2005 included \$24 million for 29 research projects. These projects are handled similarly to STAR grants—a proposal is required, and the proposal is peer reviewed and subject to the same terms and conditions as other grants. The process can be more labor intensive for NCER staff because some institutions need more assistance with the proposals, but staff work to ensure that the research benefits EPA.

NCER communicates through many venues. The NCER Web Site is a good source of information and contains fellowship abstracts and annual and final STAR reports. Staff work to consolidate information in categories that address specific topics. Search functions allow for information to be grouped and sorted by congressional districts or EPA regions. Staff continually refines the Web site and its search capabilities to make the interface more useable and accessible. NCER has three communications staff who organize “big check” events, send congressional representatives letters on STAR and GRO fellows in their districts, and produce 10-40 news releases and advisories per year.

The Measure of STAR provided ORD with feedback on the STAR Program from the National Research Council. The report found that NCER-funded research is relevant, and the Agency does a good job of attracting the best and brightest scientists for its extramural research program. NCER is pleased with the report’s comments and is implementing recommendations from the report. The report recommended that the fellowship programs continue, and NCER continues to support those programs. The challenge is to make results from the external research funded by ORD relevant to the Agency’s decisionmaking. NCER staff is working to collect and disseminate the research results for effective use in EPA’s different divisions, offices, and centers. For example, NCER has provided briefings (e.g., see <http://es.epa.gov/ncer/briefings/nerl/>) that allow research results to be communicated within EPA.

NCER-funded research has been cited in nationally recognized journals (as seen through bibliometric analysis). The strengths of NCER’s grants program include the flexibility to begin new programs easily, proactive communications and outreach, and a nationally recognized peer review process. Ms. Clark highlighted examples of STAR results that impacted regulations and voluntary actions, provided tools and methods for decisionmaking, improved the knowledge of environmental impacts, and addressed educational needs. Ms. Clark mentioned that more specifics on NCER’s role in educational areas would be provided in Ms. Willett’s presentation on the STAR and GRO Fellowship Programs.

Ms. Clark concluded with an overview of the new research areas in which NCER will be involved, such as Nanotechnology, Sustainability, Homeland Security, Computational Toxicology, Ecosystem Services, and Biotechnology. The new research areas are ones that NCER may consider addressing in the fellowship program as well.

Dr. Duke asked if there were any questions for Ms. Clark. Dr. Donald Scavia noted that it would be helpful to have overall results rather than just examples of the career paths of STAR and GRO fellows. He also asked who determines the research areas that would receive reduced funding. Mr. Joseph Jarvis answered that some resource changes are the result of congressional changes to the President's budget request; others are based on ORD management decisions. Mr. Jarvis offered to investigate further the specific reductions shown in the charts.

Dr. Richard Carson asked if the bibliometric analyses included the STAR and GRO fellows research and if it would be possible to receive the results. For his part of the charge, it would be helpful to have information on the number and type of research papers produced by the fellows. He acknowledged that recently funded fellows may not have produced much yet, but if NCER staff could provide data from previous fellows that would be helpful. Ms. Willett responded that the bibliometric analyses mentioned by Ms. Clark are subject based. For STAR and GRO fellows, the data are being collected in stages. Presently, NCER is analyzing the information in the files and other information that has been collected on a voluntary basis. This information will be provided in the overview material. ORD staff is requesting recommendations from the Subcommittee about what additional data are needed. Is it worth the effort to go back retrospectively for the past 10 years and collect the information on past fellows? The existing data will be sent to the Subcommittee members next week.

Dr. Denson noted that a green engineering course was listed as an example on the education slide. He requested more information on how green engineering topics are being disseminated at the undergraduate level, as that represents an area of opportunity. Ms. Clark responded that the grant mentioned on the slide was administered through the other research division at NCER, but she will obtain that information for the Subcommittee.

Dr. Duke then introduced Ms. Stephanie Willett to present information on the STAR and GRO Fellowship Programs.

STAR Fellowship Program

Ms. Stephanie Willett, ORD, NCER

Ms. Willett noted that STAR Graduate Fellowships have been awarded annually since NCER's creation in 1995, with the exception of 2002. The goal of encouraging promising students to obtain advanced degrees and pursue careers in an environmental field has not changed. This goal is consistent with the immediate and long-term mission of EPA to protect public health and the environment by providing well-trained environmental specialists and new research in science and engineering.

Since 1995, 1,117 STAR Graduate Fellowships have been awarded, representing approximately 100 awards per year. The fellowship program has an annual budget of approximately \$10 million (with the exception of 2002, when it was zeroed out). This represented 10 percent of the

original NCER budget, but now is proportionately higher as the NCER budget has been decreasing.

Funding is provided in 18 research categories each year—Engineering, Atmospheric Science, Chemistry, Geology, Economics, Geography, Decision Making, Urban Planning, Biochemistry, Microbiology, Public Health, Toxicology, Health Physics, Aquatic Systems Ecology, Oceanography, and Terrestrial Systems Ecology. The Health Physics category was added in 2005; some of the category names have changed, but the list of RFA categories has been fairly constant. Applications are accepted for all research areas every year.

The fellows receive up to \$37,000 per year, which is an increase from \$34,000 received annually prior to 2004. The program is open to all U.S. citizens or permanent residents who are full-time graduate students. It is a highly competitive program with 1,200-1,800 applicants, and less than 10 percent of applicants are awarded fellowships. Additional specific information will be included in the overview material that will be sent to the Subcommittee members.

Electronic submission was added as an option to the application process in 2005. Expert external panelists review the applications as with other NCER grant programs, and student merit (academic merit and potential success) is the primary criterion. Internal ORD programmatic review occurs for all of the applications rated “Excellent”, which represents approximately 15 percent of the applications received. Internal input comes from EPA program offices, ORD laboratories and centers, and Regional Science Liaisons. An attempt is made to balance the research portfolio by considering research priorities and future directions as well as the geographic distribution of awards. The final decision maker is the NCER Director.

STAR fellowships benefit from the name recognition of the STAR Program. RFAs and Fellowship awardees are announced via the NCER Web Site and press releases. The use of electronic submissions through <http://grants.gov> is likely to increase program visibility and awareness. To publicize the fellowships awarded, letters are sent to congressional representatives with a list of fellows in their districts, and press releases are provided to fellows’ local newspapers. Fellowship conferences are held biannually, with the next conference scheduled for September 23-27, 2006, in Washington, DC. The program is building on the successful model of the 2004 conference and about 250 fellows, invited guests, and speakers are expected to attend.

Ms. Willett showed a slide that provided a comparison of the number of fellowships awarded through various federal fellowship programs in 2004. ORD’s STAR Fellowship Program is small compared to NSF’s program, but it is modeled on the best practices of the NSF and other larger programs. The STAR Fellowship Program is comparable to other federal fellowship programs in terms of resources provided to a fellow. More information is available in the report *Higher Education: Federal Science, Technology, Engineering and Mathematics Programs and Related Trends* (GAO Report No. 06-114, October 2005) if Subcommittee members are interested.

Dr. Duke asked if there were any questions for Ms. Willett on the STAR Fellowship Program. Dr. Nikola Garber noted that the annual distribution for the program was \$10 million, but with 100 fellows that would be only \$3.7 million supporting fellows. She asked if information would be provided on how the remaining funds are spent. Ms. Willett clarified that fellows are funded

over 2- to 3-year periods; \$3.7 million funds the new fellows and the remainder goes to existing fellows. Dr. Garber requested information on the other funding costs for conferences and staff salaries. Ms. Willett responded that such information would be provided in the overview material to be sent to the Subcommittee members.

Dr. Scavia asked if demographic and diversity information were available and if such information was a factor in making award decisions. Ms. Willett answered that NCER was not allowed to factor such information into the selection process, but statistics are collected and are available in an appendix to the forthcoming information. Dr. Duke informed the Subcommittee that the appendices would be received along with the overview materials.

Dr. Gary Barrett asked if EPSCoR funding was used for minority programs or for state programs; he also inquired as to the funding levels. Ms. Clark responded that EPSCoR funding was not used for fellowships presently; EPSCoR funds research through grants to states. Approximately one-half of the states are eligible to receive EPSCoR funding. Previously, the EPSCoR funding decisions were made through a separate program, but that has changed. Proposals received from EPSCoR states through the existing RFAs that meet external and internal review criteria can be funded with EPSCoR funds.

In response to Ms. Willett's statement that applications were expected to increase because of the opportunity for electronic submissions, Ms. Sturges Scott asked if there was an increase in the number of applications received in 2005. Ms. Willett responded that the number of applications for 2005 appears to be lower than in previous years, but this could be because of issues related to Hurricanes Katrina and Rita.

GRO Fellowship Program

Ms. Stephanie Willett, ORD, NCER

Ms. Willett noted that the GRO Fellowship Program is a limited competition fellowship program that was in existence prior to NCER's formation and has had many names. The goals of the program are to build capacity for environmental research at schools and universities that receive limited research and development funds and to encourage promising students from smaller institutions to obtain advanced degrees and pursue environmental careers. Additionally, a goal for the GRO Undergraduate Fellowship Program is to encourage students to continue education beyond a baccalaureate degree. The GRO Graduate RFA categories are the same as those of the STAR Fellowship Program, and 121 GRO Graduate Fellowships were awarded between 1999 and 2005, with approximately \$11 million in total expenditures. The annual expenditures are approximately \$1.5 million.

GRO Graduate Fellowships are awarded to U.S. citizens or permanent residents who attend eligible institutions. NCER uses NSF-compiled data to determine eligible institutions. Currently, the list includes one-half to two-thirds of the schools in the United States. Students are funded incrementally over 1 to 3 years; Masters students can receive 2 years of funding, and Ph.D. candidates can receive 3 years of funding. As with the STAR Graduate Fellowships, the GRO applicants are processed through an external peer review. The difference is that applicants considered "Excellent" and "Very Good" are considered in the internal review process (historically, 10% to 25% of applicants).

Ms. Willett presented a list of universities that have received three or more GRO Graduate Fellowships: University of Texas at El Paso; University of California, Santa Cruz; University of Maryland Eastern Shore; Florida International University; New Mexico State University; California State University, Fresno; and the University of Puerto Rico. Additional information will be provided in the overview material to be sent to the Subcommittee members.

The GRO Undergraduate Fellowship Program is unique because fellows are funded for 2 full years of college with a stipend and tuition support as well as funding for a 3-month summer internship. The GRO Undergraduate Fellowship RFAs include more general research categories, such as Natural and Life Sciences, Environmental Science, Engineering, Social Sciences, Physical Sciences, Economics, and Mathematics and Computer Science. Since 1997, 116 GRO Undergraduate Fellowships have been awarded, with an annual budget of approximately \$650,000. This program also uses an external peer review process, with those applicants who are rated "Excellent" and "Very Good" receiving further consideration. Historically, 20 to 30 percent of the undergraduate applicants pass the external peer review process. Some years, ORD has had more money than applicants even though the Agency does extensive outreach in the minority community. Program staff attends or has a presence at 5 to 10 major professional, scientific conferences each year. A GRO Undergraduate newsletter has been published twice a year since 2002.

The staffing for all of the fellowship programs consists of three full-time staff members and one full-time equivalent in contractor support, with some assistance from other NCER staff members.

The outcome approach is new for the Fellowship Programs so ORD staff welcomes feedback from the BOSC on how the programs are doing currently and suggestions for improving them in the future. Of particular interest to Ms. Willett is guidance on when to take measurements, because research and education funds are long-term investments. Because fellowships do not have direct or immediate benefits, it is a challenge to show the benefit to EPA, and staff would be interested in receiving Subcommittee feedback in this area. The fellowship staff also is interested in comments on policies or barriers that impede the best results from the fellowship programs.

Dr. Duke asked if there were any questions for Ms. Willett on the GRO Fellowship Programs. Dr. Barrett asked about the length and timing of the undergraduate internship. Ms. Boddie responded that it was 10 to 12 weeks; the timing depends on the student, but is normally from the junior year into the senior year. Dr. Scavia asked if the staff of three plus a contractor was for the complete GRO Fellowship Program. Ms. Willett clarified that the staffing listed on the slide was for both STAR and GRO Fellowships, and included staff members who provided part-time assistance to the program.

Dr. Scavia asked how and by whom the decision is made to fund a certain number of graduate versus undergraduate fellows. Ms. Clark answered that the decisions predate most of those who presently are working on the programs, but the allocations of resources for the fellowship programs have not changed in recent history. Dr. Scavia noted that it is helpful to know what flexibility different organizational levels have in such decisions. Mr. Jarvis stated that it was his understanding that the distinction between undergraduate and graduate funding is made at ORD headquarters and that NCER has maintained the traditional funding levels.

Ms. Sturges Scott asked if receipt of a GRO undergraduate fellowship award impacted an individual's GRO graduate or STAR fellowship applications. Ms. Willett responded that it does not; applicants can compete or recompile for any of the awards for which they are eligible. Science priorities and quality of the application drives decisions, and some individuals have received all three types of awards.

Dr. Denson stated that some companies have created fellowships or scholarships for undergraduates to motivate students. He suggested collecting information on companies that have such internships to provide a benchmark for EPA in terms of overall strategy. Ms. Willett thanked him for his comment and noted that all of the internships are at an EPA facility. Ms. Georgette Boddie explained that EPA has a contract with Environmental Careers Organization (ECO) to place fellows in summer internships at EPA sites.

Dr. Barrett asked if interns receive academic credit and continue research work at their home institution beyond the internship period. Ms. Willett stated that presently academic credit is not given for the internship. Dr. Barrett noted that a summer internship often is too short of a time to produce a paper or other result. Increasing the flexibility of the program to allow for continuation of the project into the fall semester could provide added benefit to the student. Ms. Willett responded that presently the program is not set up that way, and such activity would need to be initiated by the student or his/her adviser.

Dr. Adgate asked for clarification on the criteria for determining eligible institutions whose students could apply for GRO awards. Ms. Willett replied that EPA uses NSF information that summarizes the level of federal research and development funding received by an institution. Students must attend institutions (either public or private) that receive less than \$35 million per year in federal research to be eligible to apply for GRO Fellowships. The list of institutions does include most historically black colleges and universities serving primarily Hispanic students as well as tribal colleges.

Public Comments

Dr. Duke asked if anyone would like to make a public comment. Dr. Noel Gurwick identified himself as a former STAR fellow. Dr. Gurwick was invited to present a poster at the March meeting, but he is unable to attend. He has provided written comments to Ms. Kowalski and Ms. Willett but wanted to ask ORD staff a few questions about the program. Ms. Kowalski stated that ORD had received his testimonial and Subcommittee members would be receiving that information as part of the testimonial section in the materials that would be sent to the Subcommittee.

Dr. Duke recognized Dr. Gurwick and allowed him to ask questions. Dr. Gurwick mentioned that STAR fellowships were for 3 consecutive years from the time of offer for Ph.D. students; he asked ORD staff if it was possible for EPA fellows to receive funding for 3 out of 5 years, similar to the terms of NSF fellowships. Ms. Willett responded that ORD has made a change in the program that now allows fellows to receive funds over a 4-year period (i.e., the fellow could take 1 year off from fellowship funding and then resume the fellowship). She cited administrative problems that do not allow for extension of the fellowship time to 5 years.

Dr. Gurwick noted that in her presentation Ms. Willett stated that 15 percent of the STAR fellowship applications are considered for internal review. In 2002, Dr. Gurwick stated that he was told that the quality of the funded proposals would not be diluted, even if EPA funded double or triple the number of fellowships. Ms. Willett replied that all of the proposals that pass the peer review are high quality and considered fundable. Besides the external peer review process, an internal decisionmaking process ultimately determines which fellows are funded. More applicants qualify for funding than the program is able to fund. Dr. Gurwick asked if the staff thought that quality of research would be diluted if NCER was able to fund 25 percent of the applications. Ms. Willett responded that she did not believe so because the present selection process provides the Agency with high quality fellows.

Dr. Gurwick mentioned that a number of government laboratories and federal environmental research programs have research needs and are interested in working with graduate students. It would be beneficial if the EPA fellowship programs could play an active role in making EPA fellows aware of possibilities for collaboration with other government research opportunities. Ms. Clark responded that this was a good suggestion, and it is an active discussion topic within the fellowship program. Ms. Willett noted that staff needed to address options for such partnering that could follow EPA and governmental policy. In addition, time is needed to make such connections and address such opportunities.

Dr. Scavia asked how program staff ensured that the undergraduate internship was a meaningful research experience. Ms. Boddie responded that ECO provides a listing of facilities and projects at the EPA sites. These options are sent to the students and they discuss them with their advisors. The outcomes of the internships are published in the program's biannual newsletters.

Dr. Barrett asked if the Ecosystem Services focus mentioned in Ms. Clark's presentation might replenish some of the funding for the Ecology RFAs. Ms. Clark replied that presently funds are being directed towards internal ORD research in that area.

Face-to-Face Meeting Coordination

Dr. Clifford Duke, Subcommittee Chair

Dr. Duke reviewed the draft agenda for the March 2-3, 2006, face-to-face meeting of the Subcommittee. The meeting will include a full day on Thursday, March 2, resume on Friday morning, March 3, and continue until 2:00 p.m. The agenda provides time for the poster sessions and discussion of the Subcommittee's responses to the charge questions.

Dr. Duke assigned the Subcommittee members to the different posters sessions based on their lead roles for the charge questions. Dr. Barrett and Ms. Sturges Scott were assigned to take the lead on the STAR posters and provide the recap to the complete Subcommittee. Drs. Adgate and Scavia, as leads for the GRO Graduate and Undergraduate Fellowship sections of the report, respectively, were assigned to focus on the GRO posters and lead the discussion for those posters. Drs. Carson and Denson were asked to focus on the ORD administrative posters. Dr. Duke asked ORD staff to provide a general idea of the content of the administrative posters. Dr. Dale Manty noted that the goal of the ORD staff-presented posters is to address the various aspects of the STAR/GRO processes.

Progress on Charge Questions and Draft Report Process

Dr. Duke stated that he would prepare a writing schedule for the Subcommittee members. He reminded the Subcommittee members of the proposed report organization and the assigned lead writers for the various charge questions presented on the first conference call.

To facilitate exchange of ideas and allow for the assigned leads to compile information for the report, Dr. Duke suggested the use of small Subcommittee workgroups. Such groups are allowed by FACA as long as the groups are limited to three or fewer Subcommittee members (less than half of the Subcommittee membership). Dr. Duke will send an e-mail of suggested workgroups to the subcommittee. Each chapter lead will coordinate e-mail exchanges for his/her small group. As a consultant, Dr. Hall can participate as a fourth person on any of the workgroups.

Dr. Duke stated that the Subcommittee Work Sessions noted on the draft agenda would provide time for discussion and consensus building on important Subcommittee findings. He did not propose to use these times to write the document by committee as that is not an effective use of time. The final agenda item for the face-to-face meeting is a presentation of preliminary findings and last remarks. Drs. Barrett and Denson requested a copy of the draft agenda. Ms. Kowalski agreed to e-mail them a copy.

Dr. Duke directed Ms. Kowalski to consider opportunities to change the agenda for the face-to-face meeting to include some time for workgroups to convene during the meeting on Thursday. Ms. Kowalski agreed and noted that during the workgroup time, FACA is not invoked, so the contractor would not take notes, and Subcommittee members would be asked to report back to the full Subcommittee on any workgroup discussions.

Dr. Scavia asked for guidance on the approximate length of chapters of the report. Dr. Duke noted that past program reviews are available on the BOSC Web Site (<http://www.epa.gov/osp/bosc>), and it would be beneficial for Subcommittee members to skim them to get an idea of length and amount of detail. Ms. Kowalski said she would provide links to the reports on the BOSC Web Site and, if needed, could provide members with hard copies of the reports. The reports do vary in length, but five previous Subcommittee reports are available.

Dr. Adgate asked what the final deadline was for the Subcommittee's report. Dr. Duke stated that the goal is to submit the report to the BOSC Executive Committee for review at its June 1-2, 2006, meeting. Ms. Kowalski noted that other Subcommittees chose to have a follow-up conference call after the face-to-face meeting to resolve issues and solidify a final draft. Dr. Duke agreed that would be a good idea and said he would work with Ms. Kowalski to schedule a conference call, possibly in early April.

Additional Needs/Action Items

Dr. Duke stated that once the workgroups have been established, the lead Subcommittee members for the various charge questions should utilize the workgroups to begin to exchange views and focus for the various chapters of the report.

Drs. Scavia and Carson requested a listing of the present positions of past ORD graduate fellows and the institutions attended by past undergraduate fellows. Ms. Willett responded that NCER has some data on some of the fellows, but the information is not complete. The forthcoming overview materials focus on fellows from one particular award year. Ms. Willett noted that follow-up information for past fellows is collected voluntarily as this information was not a requirement at the time the funds were distributed.

Dr. Carson asked for more information on the bibliometric analyses that addressed specific subject areas. It is important in the review process to have some idea of what publications the fellows are producing. Dr. Manty clarified that the information mentioned is collected from all STAR grants not just the fellowships. Ms. Karen McClure noted that eight pages of publications citations are included in the overview information that will be provided to the Subcommittee. Ms. Willett reiterated that the data collection is occurring in stages; presently, data collection from past fellows is voluntary, but in the future, staff will be more aggressive in collecting information. Considerable time and effort is required for data collection so the Fellowship Program staff is seeking input from the Subcommittee on how much effort should be made to collect data from past fellows as well as recommendations on future data information needs. Dr. Duke stated that it would help the Subcommittee if ORD staff describes its present goal for data collection and its plans for the future. Ms. Willett said this information is included in the material forthcoming to the Subcommittee.

Ms. Kowalski asked if the Subcommittee members had any requests for revision to the charge. Dr. Duke noted he had received no input from Subcommittee members on potential revisions so the charge would stand as final.

Adjournment

Dr. Duke adjourned the conference call at 4:05 p.m.

Action Items

- ✧ Ms. Kowalski will provide the Subcommittee members a new table of contents for their notebooks to include additional materials received.
- ✧ Dr. Duke will send a draft writing schedule to the Subcommittee members by February 24, 2006.
- ✧ Dr. Duke will begin drafting the introduction section for the report.
- ✧ Dr. Duke will assign the Subcommittee members to workgroups for discussion and refinement of report sections.
- ✧ Ms. Kowalski will send the Subcommittee members an e-mail with a link to the BOSC reports page.
- ✧ Ms. Kowalski will poll the Subcommittee members on their availability for a conference call to be held after the face-to-face meeting for purposes of revising the draft report.

- ✧ Ms. Kowalski will provide Drs. Denson and Barrett a copy of the draft agenda for the face-to-face meeting.
- ✧ ORD staff will provide information on dissemination of green engineering topics at the undergraduate level.
- ✧ Mr. Jarvis will investigate the rationale and decisionmaking process of funding reductions to different NCER research focus areas.

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APPENDIX A: Teleconference Agenda

SCIENCE TO ACHIEVE RESULTS (STAR)/GREATER RESEARCH OPPORTUNITIES (GRO) SUBCOMMITTEE

DRAFT AGENDA
Thursday, February 16, 2006
2:00 – 4:00 pm Eastern Time

CONFERENCE CALL
Participation by Teleconference Only

2:00-2:05 pm	Welcome	Dr. Clifford Duke, Subcommittee Chair
2:05-2:15 pm	Administrative Procedures - Receipts, Time Sheets - Logistics for Face-to-Face Meeting	Lori Kowalski, Subcommittee DFO
2:15-2:30 pm	STAR/GRO Fellowship Programs - Overview	Ms. Becki Clark, EPA/Office of Research and Development
2:30-2:50 pm	STAR Fellowship Program	Ms. Stephanie Willett, EPA/Office of Research and Development
2:50-3:20 pm	GRO Fellowship Program	Ms. Stephanie Willett, EPA/Office of Research and Development
3:20-3:30 pm	Public Comments	
3:30-4:00	Face-to-Face Meeting Coordination - poster assignments - progress on charge questions - draft report Additional Needs/Action Items	Dr. Clifford Duke, Subcommittee Chair
4:00 pm	Adjourn	