SUMMARY
FIFTH ANNUAL MAP MEETING
7-8 October 2007
Four Points Sheraton Hotel at BWI

BACKGROUND

The format of the meeting was changed dramatically from previous years. In previous years, the meeting consisted of presentations from every participant that lasted a total of 15 minutes (presentation and discussion). There was very little time for follow-up or networking. In addition, we had one or more invited speakers who discussed such topics as evaluations or other federal programs that had the same goals as our MAP. This year's program had several new features: (1) fewer presentations: eight programs (approximately one-third of grantees) were selected to give presentation and each program was discussed for approximately 30 minutes (15 minutes each for presentation and discussion); (2) topics of interest: two topics selected by the participants were discussed and were lead by several of the grantees with Advisors acting as resource persons; and (3) subcommittee reports: the training committee's subcommittees on K-12, undergraduates, graduates, and postdocs briefed the group about their discussions. Since the meeting was held in the Baltimore area, we invited participants in the Meyerhoff Scholars Program to give their perspectives; the faculty presented the program features and the students gave their impressions of the program. See Appendix I for the agenda and Appendix II for the list of participants. In general, the participants found the meeting to be more productive and requested additional time next year to net work with fellow grantees in order to follow-up on some of the discussions/programs that were discussed during the meeting. Below are highlights of the meeting.

MEETING SUMMARY

- **Meyerhoff Panel Discussion.** The Meyerhoff Scholars Program has two components, the undergraduate and the graduate divisions. The faculty members talked about: (i) the barriers to success (fear of disapproval by peers, perceived hostile environment, inadequate socialization, gaps in knowledge and skill development, limited exposure to models of academic excellence, importance of being proactive, overall low expectation on the part of faculty and need for financial aid). (ii) structural components of the program (aggressive recruitment, financial aid, summer bridge program to get students socialized and academically prepared, tutorials, summer research internships, faculty involvement and commitment, peer study groups and program core values. Graduate students also travel to national scientific meetings, participate in monthly research meetings, participate in selecting seminar speakers and are supported financially through completion of their degree. (iii) administrative structures (intellectual and financial commitment from the senior leadership, involved faculty and staff, financial aid and active in recruitment). (iv) academic components (personal advising/counseling, summer bridge program, research experience and peer study groups). (v) social components (attend sports activities, go on field trips, access to higher level students, sense of unity—the whole stronger than the parts concept, sense of community—gender meetings, meetings with family, meeting with leadership, discussion of program values, such as sitting in the front of the class, staying focused, being prepared for classes/tests, having parental support and staff interacting with parents.

  Observations/Facts: (i) When the program first began, it was open only to African American males. The programs are now open to females and students of all racial and

ethnic groups. (ii) Students who spend more time on campus are more successful. (iii) The retention rate for graduate students is 75%. (iv) Student speakers acknowledged the importance of institutional commitment, sense of community and program values. (v) Students and faculty need to discuss when things are going well and not so well so that interventions are done early. (vi) Upper level students are encouraged to volunteer as tutors because it is important that all students know that URM have knowledge to impart. It is also an attempt to change the culture of how other individuals think about people from different races/ethnicities. (vii) The best predictors of success are previous research experience, previous exposure to a wide range of activities, parental involvement and a selection process that involves meeting with students for over a week-end. SAT and GPA scores have limited value in predicting success in college. (viii)Change will come when "*faculty care more than others think is wise; the administration risks more than what others think is safe; the university dares more than other think practical; and the students dream more than other think is possible."*

- **Grantee Presentations.** The following institutions were asked to present their program goals, progress, and challenges: (i) T32s from the Princeton, University of California, Berkeley, University of Pennsylvania and University of Wisconsin; (ii) CEGS from Dana-Farber Cancer Institute and Johns Hopkins University; (iii) Database-Harvard University; and (4) Large Scale Sequencing Center-Washington University, St. Louis. Much progress has been made, although the Advisors are still concerned that we do no have any metrics to measure outcomes or cost benefit. We asked the presenters to discuss what they considered challenges in implementing their programs, the list included the following and falls into four general areas: (a) Recruitment-- ensuring diversity amongst the URM supported; difficulty in recruiting students who have the option of going to many other high quality schools; getting faculty to spend more time on recruiting trips; and finding affordable housing for summer program participants; (b) Faculty Involvement-getting faculty committed as mentors; (c) Attitudes--changing the attitudes of faculty who think URMs are not qualified and helping students understand faculty and vice versa. (d) Outcomes--providing appropriate enrichment activities; coordinating MAP activities within the institution; and ensuring competitiveness in the job market.

- **Grantee Panel Discussion on Gap Filling for Success in Graduate School.** The group discussed strategies for ensuring that graduate students who are not completely prepared for graduate school can be successful. The point was made that graduate school admission committees need to be risk takers and not use GREs as the most important selection criterion for admission. Most participants felt that the GRE should be only one of several evaluation factors, but since schools rely heavily on it, students should strive to make a high score. Some of the suggestions for helping students who have been admitted, but fall short in some areas were: The application process should be designed to identify students who have potential, but need additional need help in order to be successful. Some of the strategies for closing the gap included: summer bridge programs prior to enrollment in graduate school that concentrate on enhancements in academics, writing and presentation skills; and laboratory skills. Mentoring that includes explaining to students why certain courses are necessary and how they will be helpful in future research projects; giving the student an appreciation of the culture of science which includes constructive criticisms of research and ideas (not of the individual) and the need to produce multiple drafts before the manuscript is finalized. In some cases, students may need to take fewer courses so that the student can give more attention to the difficult courses; dropping a course or two to provide additional time to focus on fewer courses should not be considered a negative; and having a committee that monitors students' progress during the semester so that problems can be identified and resolved early.

- **Grantee Panel Discussion on Mentoring.** The discussion started out with one participant describing how mentoring for the summer research program is conducted at

his institution. It starts with the responsible faculty member recruiting principal investigators to mentor students. The student is matched with the PI based on interests. The faculty member responsible for the program makes periodic visits to the lab to talk with the mentor and the student. In addition the faculty member usually eats with the students in the evenings and because the setting is more informal, students are more open to discussing their experiences. It is also important to emphasize that a good mentor is not necessarily the person who is from the same racial/ethnic group or gender. A good mentor is one who listens and cares about a student and helps her/him achieve goals that may not have been possible without the mentor's help. In a word, the mentor should have the "best interest of the student at heart."

Graduate students and postdoctoral fellows should also be considered "mentors in training." They will take on the persona of and the environment created by the laboratory leader, so PIs should exhibit good mentoring skills and students should be encouraged to become good mentors to students at lower career levels.

An important part of mentoring is the ability of the mentor to convey the sense of excitement about her/his research to the student, reward achievements, have the student take ownership of the research so that the student is a co-author on publications, develop a relationship of trust so that the student feels free to talk about academic and family issues, and share professional connections. The participants noted that there are several publications on mentorship that have been published by HHMI and the National Academy of Sciences.

Institutions need to do more to reward good mentors. This is an activity that usually takes up a lot of time and commitment on the part of the mentor if it is going to be successful. Some institutions give awards for mentoring. Whereas this is a step in the right direction, it does not make mentoring a critical job element that is required of all faculty and is considered a critical activity for promotions.

Students also have a role in facilitating the mentoring relationship, such as keeping the lines of communication open, letting the mentor know when the student is having a problem in their course work, research, or family situation, establishing peer support groups to identify and resolve problems; and using peer groups to critique oral and written presentations.

- Subcommittee Reports. (i Undergraduate—The group meets quarterly by teleconference and focuses on one topic. The current focus is to identify all undergraduate research programs that have been successful in getting their participants into quality graduate schools. (ii) Graduate/Postdoctoral—The current focus is on finding sources of funds to assist graduate students and postdoctoral fellows' transition to funding mechanisms that will support their next career level. They plan to put together a website which brings all this information together. (iii) K-12. The current focus is on recruitment, distance learning, an on-line journal to allow high school students to publish their research. All three groups are working on brochures for their programs. It was recommended that they collaborate with each other.

2008 ANNUAL MAP MEETING

The California Institute of Technology will host the 2008 annual MAP and CEGS meetings. The MAP meeting is scheduled for October 14-15. We are looking to extend the time to allow more opportunities to network.

IMPORTANT WEBSITES AND REFERENCES

1. October 5 Science (volume 318, number 9847) journal about mentoring and differences between NSF and NIH. In the printed version of the journal, the article starts on page 11. There are other articles about Native American and Latino on page 123. http://sciencecareers.sciencemag.org/career_development/previous_issues/articles/2007_10_05/caredit_a0700140. (Leonore Reiser).

2. October 12 Science has some interesting articles. The Rita Thompson story is excellent and there is a somewhat useful list of grants. http://sciencecareers.sciencemag.org/career_development (Lenore Reiser).

APPENDIX I

AGENDA

FIFTH ANNUAL MEETING
NHGRI RESEARCH TRAINING ADVISORY COMMITTEE MEETING WITH MAP GRANTEES
1:00 PM 7 OCTOBER 2007 to 1:00 PM 8 OCTOBER 2007
Chesapeake Ballroom
Four Points Sheraton BWI Airport Hotel
Baltimore, Maryland

PURPOSE OF MEETING: (1) to provide information about the programs to Advisors who have a responsibility to advise the NHGRI on its research training activities; (2) to share program development, implementation and evaluation information among grantees; (3) to identify areas of programmatic concern and to discuss possible solutions; and (4) to discuss topics, issues, concerns, etc suggested by the participants, the advisors or the staff.

Sunday, 7 October 2007

1:00 p.m. Welcome and Introductions

1:30 Panel Discussion: Meyerhoff Scholars Program

Meyerhoff Scholars Program
- Undergraduate
  - LaMont Toliver, Ph.D. (Faculty);
  - Benyam Kinde, (Student)
- Graduate
  - Justine Johnson, (Faculty)
  - Belinda Jackson, (Student)
  - Kholiswa Laird, (Student)

3:15 Coffee Break

3:30 MAP Presentations[1]

- David Schwartz (T32)
- Marc Vidal (CEGS)
- David Botstein (T32)
- William Gelbert (Databases)
- Lyle Ungar (T32)
- Feinberg (CEGS)

7:00 Open Discussion/Adjourn

Monday, 8 October 2007

7:30 Continental Breakfast

8:30-9:30 MAP Presentations Continued

[1] 15 minutes of presentation; 15 minutes of discussion

	Wilson (Large Scale Sequencing) Rokhshar (T32)
9:30 to 11: 00	Two Topics TBD (sessions led by two trainers for each topic and one or more Advisors as resource)
11:00 to Noon	Report of Subcommitteees [2]
	Undergraduate (Debra Murray and Nancy Kerk) Graduate (Jeff Long and Seth Ruffin) Post Graduate (Louise Pape and Bruce Birren) K-12 (Carla Easter and Vicky Schneider)
Noon-1:00	Summary; Feed-back; Schedule Next Training Coordinators' Meeting

[2] 10 minutes of presentation; 5 minutes of discussion

APPENDIX II

National Human Genome Research Institute (NHGRI)
National Institutes of Health
Department of Health and Human Services

Fifth Annual NHGRI Research Training Advisory Committee Meeting
With the Minority Action Plan (MAP) Grantees

October 7-8, 2007

Four Points Sheraton BWI Airport Hotel
Baltimore, Maryland

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