NAME: Undergraduate Program

INSTITUTION: Howard Hughes Medical Institute

Howard Hughes Medical Institute
Office of Grants and Special Programs
Updated – 01/15/09

DRAFT: OUTREACH AND PRECOLLEGE PROGRAMS: PRE-COLLEGE SCIENCE TRAINING AND RESEARCH

Inputs	Strategies	Outputs	Outcomes		Impacts
			(Short Term-Learning)	(Medium Term-Action)	(Long Term-Conditions)
Local high school students from disadvantaged backgrounds Free housing for students (cost share from W&M) High school teachers to teach science and SAT preparation courses Counselors from W&M Program director Funds to support four-week residential science training program (HHMI) Faculty members from William & Mary, HBCUs, and TNCC HHMI Summer Fellows Supplies	Invite local rising 11th graders to apply to a four-week residential science training program Provide daily course- and lab- work Pair high school students with HHMI fellows to conduct small research project Schedule activities that help sustain relationship between high school students and college science majors and faculty	Number of participants who are from underrepresented groups and disadvantaged backgrounds Number of science and math courses taken before, during, and after the STAR program Number and quality of the research experiences in the labs Number and quality of the “field trips” and other science related activities conducted	Students are excited about scientific research and plan to pursue their interest in science in college Students are better prepared to take the SATs Students are better prepared to succeed in high school science courses	Students establish and continue relationship with undergraduate science majors from William & Mary, HBCUs and TNCC Students are prepared to pursue advanced science classes and perform well in high school classes Students perform well on standardized exams Students participate in science fairs Student are able to navigate the college application process and matriculate in college Students return for workshops and mentoring	Attract and prepare students from underrepresented groups and disadvantaged backgrounds to pursue science in college Students attain scholarships for science activities Students from disadvantaged backgrounds attain positions of leadership in science Students from disadvantaged backgrounds serve as leaders in effort to recruit other students from underrepresented groups to careers in science

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Evaluation Questions for OUTCOMES	Possible Indicators/Measures	Possible Data Collection Methods and Information Sources	Rank/Priority (include brief rationale)
1. Do the courses, labs, research projects with HHMI Fellows, and science activities enhance student interest and enthusiasm for pursuing science in college? 2. Does the program prepare students from underrepresented groups and disadvantaged backgrounds for their remainder years in high school, the college application process, and the transition to college? 3. Does sustained contact between high school students and college science majors and faculty promote interest in the sciences?	1 a. Students are excited about scientific research and plan to pursue their interest in science in college b. Students engage in and value scientific research 2 a. Students improve performance on the SATS c Students succeed in final years of high school d. Students feel prepared and are confident that they are ready to compete academically in college e. Students feel prepared socially to attend college 3 a. Sustained contact with college science majors and faculty nurtures interest in science b. Students apply to, are accepted, and matriculate in college c. Students major in science	1 a. Pre and post questionnaires b. Focus group interviews c. Counselor, HHMI Fellows, and faculty observations 2 a. Pre and post SAT scores b. High school transcripts b. Exit questionnaire c. Interviews d. Focus group e. Tracking data f. Self evaluations g. Teacher reports 3 a. Student questionnaires b. Interviews with college students and faculty c. Contact logs d. Focus group interviews e. High school teacher reports	Evaluation questions are ranked in order of how quickly an effect is expected to be seen. However data for all outcomes will be collected simultaneously.