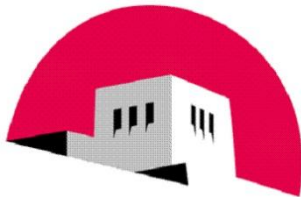


Assessment of PREP: Academic Year 2010 - 2011



The University of New Mexico

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Introduction

The University of New Mexico's Postbaccalaureate Research and Education Program (PREP) is a mentoring program with the primary goal of enhancing the ability of individuals from under-represented groups who recently received a Bachelor's degree to gain entry into graduate PhD programs. PREP has defined several objectives in order to attain this goal:

1. To recruit high-quality under-represented scholars to the program.
2. To develop and realize individualized training plans to provide laboratory research experience and academic training to improve the skill set of the scholar.
3. To provide additional training modules to develop the professional skills of the scholar.
4. To investigate the parameters impacting graduate school retention.
5. Utilize data to improve graduate training at UNM.

Funding for PREP is provided through a 4 year \$1.39 million grant from the Minority Opportunities in Research section of the National Institute of General Medical Sciences at the National Institutes of Health. PREP employs their scholars with an annual salary of \$21,000, plus health and dental benefits. PREP also covers costs of tuition for classes pertinent to the research the scholars will be conducting while in the program, vouchers are given to cover the cost of Graduate Records Examination (GRE) preparation courses and cost of the GRE, and a stipend exceeding \$1000 per scholar is provided for scholars to attend conferences to learn about and present research.

The minimum admission requirements to PREP are (PREP, 2010):

- Must be a U.S. Citizen or be a Permanent Resident.
- Must be a member of a group found to be under-represented in biomedical research. These include: ethnic groups such as, but not limited to, Hispanic, Native American/American Indian, African-American, native of the US Pacific Islands; individuals with disabilities; and individuals from otherwise disadvantaged backgrounds arising from social, cultural, economic or educationally-challenged backgrounds.
- Be a recipient of a Bachelor's degree within the 36 months prior to the time of admission into the Program.
- Be demonstrably committed to pursuing a Ph.D. in a biomedical research field, and carrying out research that will help to reduce health disparities.
- Have a tangible need to complete an additional year of training before applying to graduate school. This might arise from the applicant having little or no research laboratory experience; or from an applicant wishing to pursue a degree in a field distinct from that in which they received their Bachelor's training.
- Be willing to participate in a group training program that is designed to enhance their research education and career development.
- Have a cumulative GPA of at least 3.0 (out of 4.0).

Similar to applying to graduate school, each year there are a limited number of positions to be filled by potential scholars. Approximately 50 prospective PREP scholars apply to the program each year (based on 2009 and 2010 estimates by PREP staff). Out of the pool of applicants, up to 9 scholars can be chosen to attend PREP each year. Although all areas of an application are

taken into consideration, the content of the statement letter (i.e. the need/want of the applicant to participate in PREP) is weighed more heavily.

PREP scholars are matched with a faculty mentor in their chosen field of study and research. Mentors reported either being recruited to PREP by being contacted by the PREP Director, or self recruiting once hearing of the program through a student or fellow faculty member. The PREP academic year varies from scholar to scholar. Scholars enter the program based upon their own specific schedule between June and August of a given year and attend until the program ends in June of the following year. Throughout the academic year scholars meet with their mentors regularly, and participate in research full-time. Some of the scholars complete research projects of their own, and some shadow graduate student teaching assistants. Depending on the research lab a scholar is placed in, the scholars' schedules and who they interact with can vary. The majority of the scholars engage with their mentor, laboratory supervisor, graduate students within their lab, and the PREP program director regularly.

The University of New Mexico's Institute for Social Research (ISR) was contracted by PREP to provide annual assessments of the program through the duration of the current grant. Comprehensive pre and post program surveys were developed to gather data from both scholars and mentors. The scholars also participated in a post interview with the intention at gaining further insight into the strengths and weaknesses of PREP and to ask scholars survey questions that were more appropriate to ask in an interview setting. It was suggested by 2009-2010 PREP scholars and mentors that future surveys be administered via the internet rather than as paper based surveys. The pre program survey was paper based as had been the norm for previous academic years. The post program survey was changed from a paper based survey to a web based survey due to these suggestions. The interview questionnaire and surveys are included in the appendix of this report. The surveys were constructed based upon previous surveys used for other PREP programs, and from information gathered from the PREP Director. The post scholar interview questions were constructed in conjunction with the PREP Director. Detailed demographic information on the scholars was collected by ISR staff with assistance from the PREP Director. This is the second annual report performed for PREP by ISR in a series of annual reports.

Scholars

Demographic Information

During the 2010-2011 academic year 9 scholars who met the minimum requirements were offered and accepted positions with PREP. One of the scholars attended PREP during the 2009-2010 academic year and was accepted to attend PREP for a second academic year. The second year scholar did not complete a pre survey for the 2010-2011 academic year as they already had extensive knowledge of PREP and the pre surveys are meant to get a baseline from scholars as they begin to attend PREP. Eight scholars completed the preprogram survey. The scholars ranged from 21 to 26 years of age. Six scholars reported they were Hispanic/Latino, 1 reported they were African American, 1 reported Native American, and 1 reported White. The majority of scholars graduated in the Spring of 2010 (1 in the Spring of 2009, and 1 in the Summer of 2010) with Bachelor degrees in the fields of Biology, Microbiology, Biomedical Engineering, Chemistry, Mathematics, and Neuroscience with an average GPA of 3.4. Four of the scholars graduated from the University of New Mexico, 2 from the University of Texas at El Paso, 1 from

Oberlin College in Ohio, 1 from the University of California Irvine, and 1 from the University of Puerto Rico. Three scholars reported being the first in their family to attend college and 4 (including the preceding 3) reported being the first in their family to graduate college. One of the scholars had parents who both earned PhDs, another scholar's parent completed a PhD program, 1 scholar's parents both earned master degrees, 2 scholars had a parent who completed a bachelorette program, and 4 scholars had parents who earned a high school diploma.

Prior to PREP

Scholars reported hearing about PREP from the following ways: 3 through the PREP website, 2 through a faculty member or professor, 1 from a career fair, 1 from a friend, 1 through a news paper, and 1 from an email contact. Scholars stated their primary reason for applying to PREP was to prepare for graduate school, with the secondary reason being to improve their chances of admission to graduate school, and their tertiary reason being to gain work experience. The majority of scholars reported knowing what the PREP program entailed prior to attending. Four of the scholars stated they applied to graduate school before being accepted to PREP and six of the scholars reported having alternative plans if they were not accepted into PREP. Scholars were asked to report on a scale of 1 to 5, 1 being very important and 5 being unimportant, how important various aspects of PREP were in their decision to apply. All 9 of the scholars reported the laboratory research experience gained through PREP was very important in their decision process to apply to PREP. Table 1 reports the scholars' average ratings of the importance of aspects within PREP in their decision to apply to PREP.

Table 1. Important Aspects in the Decision to Apply to PREP

	Average Rating by Scholars
Career Planning Support	1.4
Professional Training Activities	1.4
Laboratory Research Experience	1.0
Graduate Level Coursework	2.1

Prior to attending PREP, 2 of the scholars reported having reservations about participating in PREP. Seven scholars reported being very excited about attending PREP, and one scholar was not excited at all. Seven scholars had taken measures to prepare themselves for PREP. Seven scholars reported setting goals prior to attending PREP, which were:

- Matriculate into a PhD program
- Gain confidence when collaborating with other research scientists
- Learn lab techniques that generate successful experiments, produce and publish a long term paper, and gain acceptance to graduate school
- Contribute a scientific findings for future researchers; compile data for a paper
- Complete an experiment and publish the findings
- Gain entry into a PhD Botany program with focus in medical plants, become a MD, ND (Naturopathic Doctor)
- Gain proficiency in the research process from start to finish at the professional level
- Get a good GRE score, and solely carry out a long term research project

All 9 scholars reported on the post survey they set and met goals related to their participation in PREP.

Academia

Figures from the pre and post survey regarding which academic area the scholars believed to be their strongest academic area did not change. The number of scholars reporting which academic area was their strongest are reported in Table 2. There was a change in the reporting of the scholars' weakest academic areas between the pre and post survey. The scholars' reported weakest academic areas changed from chemistry on the pre-survey to social sciences on the post survey. This change may be attributed to attending math and science courses while attending PREP. The number of scholars reporting which academic area was their weakest are reported in Table 3.

Table 2. Scholar's Reported Strongest Academic Area

	Before PREP	After PREP
Biological Sciences	6	6
Mathematics	1	1
Engineering	1	1

Table 3. Scholar's Reported Weakest Academic Area

	Before PREP	After PREP
Chemistry	3	2
Mathematics	1	2
Social Sciences	1	3
Engineering	1	2
Laboratory/Seminars	1	0
Other	1	0

Seven of the scholars attended math and science courses while attending PREP. Four scholars believed the math and science courses were extremely helpful, two thought the courses were very helpful, and one scholar reported the courses as being only somewhat helpful.

On average, the scholars reported being slightly more engaged in academic activities before PREP than after PREP. Engagement in academic activities was measured by the scholars self report on a scale between 1 and 4, 1 representing often and 4 representing never, on how often they participated in specific academic related activities. Table 4 reveals the average scholars' reported level of engagement in academic activities before attending PREP and after.

Table 4. Engagement in Academic Activities

	Average Rating by Scholars	
	Before PREP	After PREP
Worked harder to meet instructor's expectations	1.6	2.0
Set specific goals for academic performance	1.1	1.7
Discussed ideas from readings with others outside of class	1.4	1.4
Have worked with faculty members on activities other than coursework	2.5	2.3
Discussed ideas from readings or classes with faculty members outside of class	1.75	2.0

Graduate Record Examination (GRE)

Prior to attending PREP, 3 scholars took the GRE and all 3 scholars were not satisfied with their score. While attending PREP 5 scholars took or re-took the GRE. Interestingly, 4 scholars did not take the GRE. Table 5 lists the number of scholars who took the GRE and their satisfaction with their scores. One of the scholars was satisfied, 2 were content, 1 was dissatisfied, and 1 was very dissatisfied with their GRE scores. Five of the scholars reported they believe graduate schools only consider their highest GRE scores if taken multiple times, and 4 believe if they freeze up when taking the GRE they have the option to erase their GRE scores from their records. The majority of scholars reported the belief that students can still be accepted into graduate school if they do not meet the schools' minimum GRE scores. It would be beneficial for scholars if PREP informed them in more detail about how GRE scores are generally used for graduate school admission and more specifically how they are used by the specific schools to which scholars intend to apply.

Table 5. Satisfaction with GRE Scores

	Number of Scholars who took GRE Before PREP	Number of Scholars who took/re-took GRE During PREP
Very Satisfied with Score	0	0
Satisfied with Score	0	1
Neither Satisfied Nor Dissatisfied	0	2
Not Satisfied with Score	3	1
Very Dissatisfied with Score	0	1
Did Not Take GRE	6	4

The pre and post surveys gathered information from scholars on their typical test taking experiences. Scholars were asked on a scale of 1 to 4, 1 being not at all typical of them and 4 being very typical of them, to rate their typical test taking experiences. The pre and post surveys revealed that the scholars' reported test taking experiences did not change with the exception of thinking slightly more of the consequences of failure. On average the scholars reported that it was only somewhat typical of them to think about the consequences of failing a test, to do well with time limits, to feel confident and relaxed, and to feel they are unable to show how much they really knew about a subject on a test, which makes them poor test takers. The average scores never exceeded a 3, suggesting that scholars lack some confidence in their test taking abilities. Table 6 shares these results from the pre and post survey.

Table 6. Typical Test Taking Experiences

	Average Rating by Scholars	
	Before PREP	After PREP
Thinking of the consequences of failure	1.9	2.3
Do well on tests with time limits	1.9	1.8
Feel confident and relaxed	2.1	2.2
Tests do not allow me to show how much I really know, which makes me a poor test taker	2.1	2.3

Research

Scholars were asked to report on a scale between 1 and 5, 1 meaning strongly disagree and 5 meaning strongly agree, how confident they were to perform specific academic research tasks. The average confidence level of the scholars to perform specific academic research tasks rose between the start and end of participating in PREP in 5 of 8 areas measured. The increases in confident to perform the following tasks were substantive: to know what steps to take next during an experiment, to recognize strengths and limits of a scientific method or test, and to plan and organize a major project. In the area of confidence to summarize the main points of a scientific paper the scholars' ratings did not change and scores decreased in the areas of confidence in their mathematical ability and confidence to apply mathematical knowledge in the lab. The decreases in the two areas may be attributed to the scholars becoming more self-aware of their limitations or the complexities of performing scientific research. Table 7 compares the average confidence level of the scholars to perform academic research tasks at the start and end of participating in PREP.

Table 7. Confidence to Perform Academic Research

	Average Rating by Scholars	
	Before PREP	After PREP
Confident to summarize main points of a scientific paper	4.4	4.4
Confident to know what steps to take next during an experiment	3.5	4.3
Confident to recognize strengths and limits of a scientific method or test	3.3	3.9
Confident in presenting scientific paper at a conference	3.8	4.2
Confident to develop a research proposal	3.3	3.7
Confident to plan and organize a major project	3.0	3.7
Confident in mathematical ability	3.8	3.3
Confident to apply mathematical knowledge in the lab	3.9	3.6

PREP Activities

Table 8 reports the averages of how often the scholars participated in certain training activities and how helpful they thought the training activities were. The frequency of the activities occurring was reported by scholars on a scale of 1 to 5. For research and GRE preparation activities the frequency scales were from: 1 = (rarely or never) to , 2 = once or twice a week, 3 = 3 to 4 times a week, 4 = everyday, and 5 = (more than once a day) and the. The frequency scale for professional activities was: from 1 = (once or twice a week) to , 2 = once or twice a month, 3 = once or twice a semester, 4 = once to twice a year, and 5 = (rarely or never). The helpfulness of the activities was reported by scholars on a scale of 1 to 4, with 1 representing not at all helpful and 4 representing extremely helpful. Research and GRE preparation were reported as the most helpful training activities.

Table 8. Frequency and Helpfulness of Training Activities

	Number of Reporting Scholars	Average Rating by Scholars	
		Frequency of Activity Occurring	Helpfulness of Activities
Research	7	1.6	3.1
GRE Preparation	9	2.1	3.2
Professional	8	3.8	2.6

Scholars were asked to rate the amount of time they spent on certain activities while attending PREP on a scale of 1 to 3, 1 symbolizing too little time spent, 2 symbolizing the right amount of time spent, and 3 symbolizing too much time spent. The average scores reported suggests that the scholars wish to spend slightly more time on each PREP activity except for PREP meetings and on help thinking about what to do with their lives. However, the average scores also show that the time spent on each activity is close to what the scholars rated as the right amount of time spent. Table 9 lists the scholars' average ratings of how much time they spent on activities while in PREP.

Table 9. Time Spent on Specific PREP Activities

	Average Rating by Scholars
With Mentor	1.7
On Making Research Presentation	1.7
Attending PREP Meetings	2.2
Attending Lab Meetings	1.9
Interacting with PREP Faculty and Staff	1.8
With Help to Think About What to do With Life	2.1
On Coursework	1.8
Preparing for GRE	1.9
Working on Research	1.8
Developing Research Ideas	1.8
Learning Research Process	1.8
Building Computer Skills	1.8
Preparing Graduate School Application	1.9

Career

The scholars were asked on the pre and post surveys on a scale of 1 to 5, 1 symbolizing strongly disagree and 5 symbolizing agree strongly, their opinion of becoming a career scientist. It appears that the scholars' opinions on becoming a career scientist remained relatively stable from the beginning of PREP until the end of PREP. Table 10 shows how the thought of being a career scientist progressed from the beginning of PREP to the end of PREP.

Table 10. Scholar's Opinion of Becoming a Career Scientist

	Average Rating by Scholars	
	Before PREP	After PREP
Career in a science laboratory would be fun	4.6	4.6
Worried do not have what it takes to be a successful research scientist	2.5	2.7
Would be proud to be called a scientist	4.6	4.8
Collaborating with others on scientific ideas, projects and papers is attractive	4.8	4.4
Search for scientific knowledge would be boring	1.3	1.4

Based on results from the pre and post surveys, and the post PREP interviews of the scholars, all of the scholars believed that participating in PREP will and has helped with defining and reaching career goals. Four of the scholars completed an individualized career plan while attending PREP: 1 believed the career plan was extremely helpful, and 3 thought the career plan was very helpful. Six of the scholars changed their career paths after participating in PREP. All scholars reported still wanting to pursue graduate school in some capacity.

Scholars reported their confidence level on a scale between 1 and 4, 1 representing not at all confident and 4 representing very confident, to gain admission into a graduate PhD program. The confidence level of the scholars rose slightly from an average of 3.0 before attending PREP to 3.2 after attending PREP.

Experience being Mentored

All of the scholars participated in research meetings with their faculty mentor. The frequency of meeting with the mentors varied for the scholars. Six of the scholars reported they felt they spent the right amount of time meeting with their mentors, while 2 felt they spent the too little time and 1 felt they spent too much time. All of the scholars found the meetings with their mentors to be helpful. Scholars reported the frequency of their meeting with various individuals involved with their scientific research and PREP on a scale of 1 to 5 (1 = rarely or never, 2 = once or twice a week, 3 = 3 to 4 times a week, 4 = everyday, and 5 = more than once a day). Table 11 lists average reported frequency of the meeting by the scholars. It is noted that one scholar reported that they rarely or never met with their mentor, and one scholar reported meeting with their mentor every day. When the scholars' reported frequencies of meetings with their mentors were compared with the mentors' reported frequencies of meetings with their scholars, the scholars, on average, reported meeting with their mentors more than the mentors reported meeting with their scholars.

Table 11. Frequency of Meetings with Individuals within PREP

	Average Frequency of Meetings Reported by Scholars
Mentor	3.3
Lab Supervisor	4.0
Grad Students in Lab	3.3
Grad Students from Other Labs	2.4
Program Directors	2.1

The scholars were asked to rate their interactions with their mentor on a scale of 1 to 4 with 1 being very positive, 2 being positive, 3 being somewhat positive, and 4 being negative. The average rating of the scholars was a positive rating of 1.9. It should be noted that one of the scholars rated their interactions with their mentor as negative. Table 12 shows the scholars' average rating of how positive the interactions with various persons they met with on a regular basis while attending PREP.

Table 12. Ratings of Interactions with Individuals within PREP

	Number Reporting Scholars	Average Rating by Scholars
Mentor	9	1.9
Lab Supervisor	3	1.3
Grad Students in Lab	7	1.6
Grad Students from Other Labs	8	1.9
Program Directors	9	1.7

All scholars reported having adequate mentoring support to pursue a scientific career prior to beginning and after attending PREP. Seven scholars reported on the pre-survey that before attending PREP they had one or more career type mentors in their lives, and all 9 scholars reported on the post survey after attending PREP they had 1 or more career mentors in their life. Six of the scholars disclosed they could turn to immediate family for career advice (only 6 of the scholars answered this question).

After attending PREP all of the scholars reported having adequate support in their lives to pursue a scientific career. The scholars were asked if they considered certain individuals they interact with in PREP a career mentor. The scholars reported their rating on a scale of 1 to 5, 1 standing for strongly disagree and 5 standing for strongly agree. Five scholars reported they strongly agree that their mentor was a career mentor for them, while one scholar reported they disagree that their mentor was a career mentor for them. Table 13 displays the average results from scholars.

Table 13. Scholar's Consideration of Career Mentors in PREP

	Number Reporting Scholars	Average Rating by Scholars
Mentor	9	4.1
Lab Supervisor	4	2.8
Grad Students in Lab	7	3.3
Program Directors	9	3.6

All scholars except one reported they would recommend their mentor to future PREP scholars. Scholars were asked: "What was the most important quality in a mentor?" The scholars reported the most important qualities of mentors are approachableness, a desire to teach and to mentor, compassion, good listening skills, providing help to set and attain goals, and availability. The most important reported quality in a mentor was availability.

Experience with PREP Coordinator

During the 2010-2011 academic year there was a transition from one PREP coordinator to a new PREP coordinator. The new PREP coordinator requested that we specifically ask the scholars several questions during the Post PREP Scholar Interview about how the coordinator is performing in their new position.

The scholars were asked how often they met with the coordinator. Seven of the 9 scholars reported that they met once or twice a week with the coordinator, one scholar reported meeting every day, and one scholar reported meeting rarely to never with the coordinator.

The scholars were asked to rate their interactions with the PREP coordinator on a scale of 1 to 6, with 1 representing very positive and 6 representing very negative. Four of the scholars rated their interaction with the PREP coordinator as very positive and 5 rated their interactions as positive.

The scholars were asked how available the PREP coordinator was to them on a scale of 1 to 5, with 1 representing never available and 5 representing always available. Four of the scholars reported that the PREP coordinator was always available to them and 5 reported that the coordinator was available to them.

Table 14 displays the scholars' average rating of their interactions with the PREP coordinator and the scholars' average rating of how available they felt the PREP coordinator was to them.

Table 14. PREP Coordinator's Average Ratings by Scholars

	Average Rating by Scholars
Interaction with PREP Coordinator	1.6
Availability of PREP Coordinator	4.4

The scholars were asked to provide comments of how the PREP coordinator could be more helpful to them. The scholars provided many compliments of how the coordinator is doing in their position as well as some suggestions for improvement. Following is the list of the scholars' comments:

- One scholar stated it would be ideal if the coordinator presented or gave out information about summer research opportunities earlier in year (around January) and more of them with more detailed descriptions of the opportunities. The scholar also stated that the coordinator is doing great job so far.
- One scholar stated that the office of the coordinator should have a more professional tone to it. Although the scholar enjoyed their interactions with the coordinator, it appeared to the scholar that the coordinator had too much casual contact with scholars and the coordinator was too much of a friend to scholars rather than a professional. The scholar added that this comment is only meant to be constructive and not critical. The scholar also stated that the coordinator always had paper work ready in a timely manner.
- One scholar stated that although the weekly meetings are great, the scholar recommends that the coordinator schedule one on one meetings with scholars, which would be helpful in assisting scholars with the individual steps of the graduate school application process, and especially beneficial in offering support to scholars who do not get accepted into graduate school.
- One scholar stated that a computer error occurred when they were registering for their classes. Although the coordinator responded to the problem, the scholar stated the problem was not completely fixed and feels like the coordinator could have been better at following up with the issue.
- Five of the scholars stated that the coordinator is doing a good job and no improvement is necessary. Additional comments from these five scholars were: The coordinator has good skills relating and interacting with people; the coordinator is there when the scholars need them; when the scholar had questions the coordinator would find the

answer if they did not know the answer; the coordinator is very helpful; and the transition between coordinators was smooth.

Mentors

Prior to PREP

Nine mentors participated in PREP during the 2010-2011 academic year. The mentors were assistant, associate, and tenured professors from UNM ranging in years of service between 5 and 30 years. The professors first learned of mentoring in PREP by being contacted by PREP, by a UNM flyer, or by being informed of PREP by a student or fellow faculty member.

The majority of mentors (75%) never participated in a mentoring program as a mentee, but 75% had participated in a mentoring program before as a mentor. Table 15 displays the number of the mentors who previously participated in a mentoring program as either a mentee or mentor.

Table 15. Previous Participation in a Mentoring Program as a Mentee or Mentor

	Number of Mentors	
	Yes	No
Participated as a Mentee Prior to PREP	2	6
Participated as a Mentor Prior to PREP	6	2

Table 16 shows the mentors engagement in various student activities in the past 2 years prior to their involvement with PREP. All mentors reported involvement in some type of student activity beyond classroom lectures within the past two years prior to mentoring in PREP.

Table 16. Engagement in Student Activities in Past 2 Years

	Number of Mentors	
	Yes	No
Advised student groups involved in service/volunteer work	4	4
Taught seminar to 1st year students	2	6
Engaged undergrads on own research projects	8	0
Worked with undergraduates on research projects	8	0
Hired student employees	8	0

Mentors were asked to rate reasons that influenced their decision to participate in PREP on a scale between 1 and 3, 1 corresponded with not at all and 3 corresponded with a lot. Table 17 lists the mentors' average ratings of reasons for choosing to participate in PREP.

Table 17. Reasons that impacted the decision to participate in PREP

	Average Rating by Mentors
Enjoy working with undergraduate students	2.9
Experience will help develop better students	2.9
Undergraduate students need research opportunities	2.9
Experience will encourage students to pursue advance training/education	3.0
Important to promote diversity within the higher education setting	2.6
Experience will provide students with critical research skills	2.9
Experience will enrich the university	2.5

Views on Mentoring

Through the comparison of pre and post survey results it was found that the mentors' agreement increased as to whether serving as a mentor is a valuable use of their time, how serving as a mentor can make the mentor a better instructor, how research assistants can make valuable contributions in the research setting, and on the skills undergraduates possess to engage in laboratory research. However, the mentors' opinions of working with under graduate students in a laboratory setting decreased, but did remain positive. Table 18 lists the average ratings of the mentors' opinions disclosed on the pre and post surveys. The rating scale was between 1 and 5, with 1 meaning strongly disagree and 5 meaning strongly agree.

Table 18. Mentor's Opinions

	Average Ratings by Mentors	
	Before PREP	After PREP
Serving as a mentor to undergraduate students is a valuable use of my time	4.4	4.6
Faculty members can have important effect on the direction of a student's career	4.9	4.9
Serving as a mentor will make me a better instructor	4.1	4.3
Prefer working with graduate students in the laboratory setting	4.3	4.0
Research assistants can make valuable contributions in the research setting	4.5	4.6
Many undergraduate students lack the skills necessary to engage in laboratory research	4.3	3.8
Many undergraduate students lack the motivation necessary to engage in laboratory research	2.9	2.9

The overall confidence level of the mentors to positively affect the lives of young scientists, of possessing the necessary resources to be an effective mentor, and their ability to provide scholars with valuable laboratory research experience declined from the beginning to the end of the PREP academic year. Mentors rated their confidence level on a scale between 1 and 4, with 4 representing very confident and 1 representing not at all confident. Table 19 shows the average confidence level disclosed by mentors before and after PREP.

Table 19. Confidence Level of Mentors to be Effective

	Average Ratings by Mentors	
	Before PREP	After PREP
I have the ability to positively affect the lives of young scientists	3.4	3.2
I have the resources necessary to be an effective mentor	3.8	2.9
I will be able to provide PREP scholars with a valuable laboratory research experience	3.9	3.4

Mentoring Scholars

On the post survey, mentors were asked how often they held one on one meetings with their scholar. The majority of the mentors, 55.6%, reported they held more than 2 one on one meetings with their scholars per week on average. Eight of the nine mentors held research meeting with their scholars, with 75% of the reporting mentors holding these meetings 1 to 2 times a week on average. The topic most discussed during the research meetings was concerning work on the research project, and the topic least discussed during these meetings was on academic course work. On average, the scholars report meeting with their mentors more than the mentors report meeting with their scholars.

Mentors were asked how significant of an impact they believe they had on their scholars. Two of the mentors believe they had a tremendous impact on their scholars, and 7 of the mentors believe they had a great impact on their scholars. Four of the mentors elaborated on the impact they had on their scholars, their summarized responses are listed below:

- Showing my female scholar how a female faculty member deals with lab management and family issues gives the scholar a realistic view of a scientific career for a female scientist. My passion for science has influenced the scholar's decision in going to graduate school.
- My PREP scholar has learned valuable methods, and is learning how to make critical observations and troubleshoot problems.
- I have given the PREP scholar direction to the practical performance of experiments from rationale to approach, planning, execution and interpretation. The appropriate use of the scholar's technical language has improved considerably.

- I helped my scholar gain better perspective of what it means to be an academic researcher.

PREP Experience

Eight of the mentors reported they would recommend fellow colleagues to mentor with PREP, with 1 mentor reporting they would not recommend mentoring with PREP to fellow colleagues. All mentors reported that they were either satisfied or very satisfied with the research laboratory experience with their scholars and overall experience with PREP.

Comparison of PREP Academic Year Assessments

Survey results from the 2009-2010 academic year were compared to results from the 2010-2011 academic year. The survey results from both mentors and scholars remained relatively consistent. There were a few notable differences between the two academic years which are listed below.

- The average GPA fell slightly from 3.45 for the 2009-2010 incoming scholars to 3.40 for the 2010-2011 incoming scholars.
- Seven of the 2010-2011 scholars took measures to prepare themselves for PREP prior to attending whereas only 2 of the 2009-2010 scholars took measures to prepare themselves for PREP.
- After attending PREP the 2009-2010 scholars reported Engineering was their weakest academic area. The 2010-2011 scholars reported Social Sciences as their weakest academic area after attending PREP. This may be a result of only 4 of the 2009-2010 PREP scholars attending math and science courses where 7 of the 2010-2011 PREP scholars attended math and science courses. The 2009-2010 scholars reported wanting greater amounts of time to spend with their mentors, dedicated toward developing research ideas, and toward building computer skills. The 2010-2011 scholars reported spending approximately the right amount of time in all 3 of these areas.
- Over all the 2010-2011 scholars reported meeting with their mentor, lab supervisor, and graduate students from their lab and from other lab approximately 1 more time per week than the 2009-2010 scholars had.
- The scholars' opinions of whom they consider to be a career mentor to them varied from the 2009-2010 academic year to the 2010-2011 academic year. The 2010-2011 scholars agreed more strongly with their PREP mentor being a career mentor to them. However, the 2010-2011 scholars' opinions of their lab supervisor and the PREP program directors being career mentors declined, but remained positive.
- The mentors' opinions of preferring to work with graduate students in the laboratory setting decrease after participating in PREP for both the 2009-2010 and 2010-2011 academic years.
- The 2010-2011 mentors' opinion of the undergraduates' laboratory research skills increased positively when compared with the 2009-2010 mentors' opinions.

- Overall the 2010-2011 mentors' confidence to be effective mentors decreased when compared with the confidence level of the 2009-2010 mentors. On the post survey distributed for the 2010-2011 academic year it was stated by more than one mentor that they could provide a better laboratory experience to PREP scholars if they were provided with some laboratory funding from PREP for their PREP scholars.
- Five of the 2010-2011 mentors reported holding more than 2 one on one meetings with their scholars during an average week. This is an increase from the 2009-2010 academic year where only 2 of the mentors reported holding more than 2 one on one meetings with their scholars during an average week.
- All of the 2009-2010 mentors reported that they would recommend mentoring with PREP to a colleague. One of the nine 2010-2011 mentors reported they would not recommend mentoring with PREP to a colleague. However, all of the 2010-2011 mentors reported that they were either satisfied or very satisfied with the research laboratory experience with their scholars which is an increase of 14.3% in mentor satisfaction when compared to 2009-2010 mentor statistics.

Summary

The overall goal of PREP to enhance the ability of individuals from under-represented groups who recently received a Bachelor's degree to gain entry into a graduate PhD program appears to be succeeding. Although 6 of the 9 scholars changed their career paths since entering PREP, all of the scholars remain motivated to enter a PhD program of some type. At the end of the PREP academic year the scholars reported being slightly more confident of their ability to gain admission into graduate school, and more confident to perform academic research.

Two of the 5 objectives PREP has defined in order to reach their goal appear to have been met, with a third objective, which was not easily measured, potentially being met as well. These 3 objectives are discussed below. The remaining 2 objectives (to investigate the parameters impacting graduate school retention and to utilize data to improve graduate training at UNM) which PREP hopes to meet are beyond the scope of ISR's current study.

PREP's objective to recruit high-quality under-represented scholars is not easily measured, as the competitiveness of PREP's application process is undefined. All but one of the 9 scholars was from under-represented groups. Each scholar was selected from a pool of approximately 40 to 50 prospective PREP applicants. Applicants are chosen with the highest priority going to how well the prospective applicants relay their need/want to participate in PREP in their statement letter, which can be subjective, rather than their academic standing which is easier to quantify. Recommendations for improvements to the application process are presented in the following section.

The objective "To develop and realize individualized training plans to provide laboratory research experience and academic training to improve the skill set of the scholar," appears to be met as shown by scholars participating in scientific research in collaboration with their mentor, and attending academic courses in order to augment their research abilities. The scholars' self

reported increase in their confidence level to perform academic research also provides evidence of this objective being met.

The scholars reported in the post interview that one of their greatest experiences during PREP was attending the Society for Advancement of Chicanos and Native Americans in Science (SACNAS) conference. Attendance of the SACNAS conference, participation in scientific research, and attending additional courses provided an avenue for PREP to meet the objective of providing scholars with additional training modules in the development of professional skills.

Recommendations

Recommended adjustments to PREP come from three sources: scholars, mentors, and information from the surveys.

From the post interview survey scholars noted the following adjustments to the program could be useful:

- Mentors need to be available for more mentor-scholar meetings.
- Mentors should be willing to help scholars set goals around research and academics.
- Scholars need more assistance narrowing the list of potential graduate schools to which they should apply.
- Only mentors who have a desire to mentor and enjoy teaching should be selected by PREP. This suggests better screening potential mentors.
- The PREP coordinator should present summer research opportunities to scholars earlier in the year with a larger number of opportunities.
- One scholar stated that the scholars need a timeline with deadlines set for them on completing their graduate school applications, perhaps by the PREP coordinator.

On the post interview survey mentors were able to share recommendations they would like to see implemented in PREP:

- Monetary reimbursements from PREP for scholar incurred lab expenses would be welcome.
- Expand PREP to more students.
- Allow scholars more time for laboratory work.
- Scholars would be better integrated into labs if they were allowed a greater amount of time to spend in the labs.

PREP's greatest strengths are the laboratory research experiences provided, scholar-mentor meetings, professional conferences, and GRE preparation.

A suggestion made in the previous report completed for the academic year (2009-2010) remains the same this year. The majority of the scholars recommended that PREP establish a list of possible mentors and their research interests to facilitate a better match between them and a mentor. The solution to improving this area potentially lies in PREP's application process. The application process to PREP could be changed to more resemble applying to some graduate school programs. Prospective scholars could see an established list of potential mentors, their

research interests, and contact information. The prospective scholars would then be able to contact mentors to find whose lab they might best fit into. Prospective scholars could provide a priority ranking list of mentors they would prefer to work within their PREP application statement letter. The scholars would be required to express their interest and intention of working in the specific mentors' research areas in the statement letter as well. The mentors could then be given a chance to agree to mentoring specific scholars who have contacted them during the application process. This change in the application process would potentially help to create a stronger match between mentor and scholar. By default this change in application process would only enhance the objective of PREP to recruit high-quality under-represented scholars to the program, and make the recruitment process of prospective PREP scholars more competitive.

References

Postbaccalaureate Research and Education Program (2010). Retrieved on October 16, 2010 from the University of New Mexico PREP's official website: <http://biology.unm.edu/PREP/eligibility.asp>



The University of New Mexico

University of New Mexico Survey

PREP Scholar Pre-Program Survey

You will spend the next year as a PREP scholar and research assistant here at the University of New Mexico. The UNM Institute for Social Research would gather information on your opinions, knowledge and expectations of the PREP program. Thank you for completing the survey.

Your name: _____

1. Are you the first person in your family to go to college?

- a) Yes
- b) No

2. Are you the first person in your family to graduate from college?

- a) Yes
- b) No

3. How many persons do you have in your life that you would consider to be a career mentor? *(NOTE: A career mentor is someone who takes a personal interest in helping you to develop your career).*

4-9. Please indicate how much you disagree or agree with each of the following statements.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
I am confident that I could write a summary of the main points of a scientific experiment.					
I am confident that I would have a good idea of what to try next after looking at an experiment.					
I am confident that I could recognize the strengths and limitations of a specific method or test.					
I am confident that I could present an original paper at an academic/scientific conference or meeting.					
I am confident that I could develop all of the elements of research proposals including: context setting, statement of research questions, literature review, and the costing of the research project.					
I am confident that I could plan and organize one individual major project (or two/three small projects) through the stages of the project life cycle (from start up to exploitation of findings).					

10-12. Please indicate how confident you are with each of the following statements.

	Not at all confident	Somewhat confident	Pretty confident	Very confident
I am confident in my ability to apply my mathematical knowledge in the laboratory setting.				
I am confident in my mathematical knowledge.				
I am confident in my ability to gain admission to a PhD science program.				

13. Which of the following would you consider to be your strongest academic subject area? (Circle one only please)

- a) Biological sciences
- b) Chemistry
- c) Mathematics
- d) Social sciences
- e) Laboratory/seminars
- f) Engineering
- g) Other (please specify)_____

14. Which of the following would you consider to be your weakest academic subject area? (Circle one only please)

- a) Biological sciences
- b) Chemistry
- c) Mathematics
- d) Social sciences
- e) Laboratory/seminars
- f) Engineering
- g) Other (please specify)_____

15. Did you take the GRE prior to being accepted to PREP?

- a) Yes
- b) No

16. If yes, how satisfied were you with your GRE score?

- a) Very satisfied
- b) Satisfied
- c) Neither satisfied or dissatisfied
- d) Dissatisfied
- e) Very dissatisfied

17-19. Please indicate if each of the following statements is true or false.

	True	False
If you take the GRE more than once, graduate schools usually only consider your highest score.		
Many graduate schools set minimum GRE score levels below which virtually no applicants are accepted.		
If you "freeze up" on the GRE, you can have your test score erased from your record.		

20-23. Please indicate how typical the following statements are in your experience.

	Not at all typical	Only somewhat typical	Quite typical of me	Very typical of me
During tests I find myself thinking of the consequences of failure.				
I do well in tests where there are time limits.				
When taking a test, I feel confident and relaxed.				
I am a poor test taker in the sense that my performance on a test does not show how much I really know about a topic.				

24-28. In the past year, how often have you engaged in the following activities.

	Often	Sometimes	Seldom	Never
I have worked harder than I thought I could to meet an instructor's standards or expectations.				
I have set specific goals for my academic performance.				
I have discussed ideas from my readings or classes with others outside of class (students, family members, co-workers, etc.)				
I have worked with faculty members on activities other than coursework (committees, orientation, student life activities, etc.)				
I have discussed ideas from my readings or classes with faculty members outside of class.				

29. On a scale from 1-5 how excited are you to start PREP, with 1 representing very excited and 5 not excited at all.

1 2 3 4 5

30. Prior to starting the program, had you taken any steps to prepare yourself for PREP?

- a) Yes
- b) No

31. If yes, please describe the steps you took to prepare yourself for PREP.

32. Have you set any goals for yourself regarding your participation in PREP?

- a) Yes
- b) No

33. If yes, please describe those goals.

34. Do you have any reservations/concerns regarding your participation in PREP?

- a) Yes
- b) No

35. If yes, please describe those reservations/concerns.

36. How did you hear about PREP?

- a) Newspaper
- b) Email contact
- c) PREP website
- d) Career fair
- e) Professor/faculty member
- f) Friend
- g) Other (please specify)_____

37. Which of the following reasons best describes your reasons for applying to PREP
(select up to 3).

- a) To prepare for graduate school
- b) To improve my chances of admission to graduate school
- c) To get work experience
- d) To figure out what I want to do with my life
- e) To improve my academic record
- f) Other (please describe)_____

38. Did you apply to a graduate program prior to applying to PREP?

- a) Yes
- b) No

39. In the case that you were not accepted to PREP, did you have alternative career/educational plans?

- a) Yes
- b) No

40. If yes, please describe those plans.

41. How much would you say you know about PREP?

- a) A great deal
- b) Much
- c) Some
- d) A little
- e) Almost nothing

Think back to your decision to apply to PREP. How important were the following program components to your decision to apply.

42. How important was the career planning support in your decision to apply to PREP?

- a) Very important
- b) Important
- c) Moderately important
- d) Of little importance
- e) Unimportant

43. How important were the professional training activities in your decision to apply to PREP?

- a) Very important
- b) Important
- c) Moderately important
- d) Of little importance
- e) Unimportant

44. How important was the opportunity to gain laboratory research experience in your decision to apply to PREP?

- a) Very important
- b) Important
- c) Moderately important
- d) Of little importance
- e) Unimportant

45. How important was the opportunity to complete graduate level coursework in your decision to apply?

- a) Very important
- b) Important
- c) Moderately important
- d) Of little importance
- e) Unimportant

46. Which program component do you consider to be the most important to you?

47. Why do you consider this to be the most important in your decision to apply to PREP?

48. Generally, what do you most hope to gain from your experience as a PREP scholar?

49. What are you long term career goals?

50. Do you think participating in PREP will help you to reach your career goals?

a) Yes

b) No

51. If yes, how do you think participating in PREP will help you to reach your career goals?

52-56. Please indicate how strongly you disagree or agree with the following statements.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Agree strongly
Spending a career working in science laboratory would be fun.					
I am worried that I do not have what it takes to be a successful research scientist.					
I would be proud to be called a scientist					
The idea of collaborating with other on scientific ideas, projects, and papers is highly attractive to me.					
The search for scientific knowledge would be boring					

57. Do you feel you have adequate support in your life to pursue a scientific career?

- a) Yes
- b) No

58. Do you feel you can turn to members of your immediate family regarding career advice?

- a) Yes
- b) No

59. Please circle the answer below that best describes your race/ethnicity.

- a) White
- b) Black/African American
- c) Hispanic/Latino
- d) Native American
- e) Asian/Asian Indian
- f) Pacific Islander

60. What is the highest level of education that your parent(s) completed? (Mark one box per column.)

	Mother/ female caregiver	Father/ male caregiver
Did not finish high school		
Graduated from high school		
Completed a trade program		
Attended college but did not complete degree		
Completed an associate's degree (A.A., A.S., etc.)		
Completed a bachelors degree (B.A., B.S., etc)		
Completed a master's degree (M.A., M.S., etc)		
Completed a doctoral degree (PhD., J.D., M.D., etc)		

Thank you for completing our survey.



The University of New Mexico

University of New Mexico Survey

PREP Scholar Post-Program survey

You have spent the past year as a PREP scholar and research assistant here at the University of New Mexico. The UNM Institute for Social Research would gather about your experience as a PREP scholar. Thank you for completing this survey.

Your name: _____

1. Did you complete an Individualized Career Plan (IDP)?
 - a) Yes
 - b) No
2. If yes, how helpful did you find the Individualized Career Plan?
 - a) Not at all
 - b) Somewhat
 - c) Very
 - d) Extremely
 - e) Does not apply
3. Did you take math and sciences courses as a part of PREP program?
 - a) Yes
 - b) No
4. If yes, how helpful did you find your math and sciences courses to be?
 - a) Not at all
 - b) Somewhat
 - c) Very
 - d) Extremely
 - e) Does not apply

5. Did you participate in research meetings with you faculty mentor?

- a) Yes
- b) No

6. If yes, how often did you participate in these research meetings with your faculty mentor?

- a) Rarely to never
- b) Once or twice a week
- c) 3-4 times a week
- d) Every day
- e) More than once a day

7. How helpful did you find meetings with your faculty mentor to be?

- a) Not at all
- b) Somewhat
- c) Very
- d) Extremely
- e) Does not apply

8. Did you participate in research training activities during your time in PREP (*NOTE: includes oral presentations of your research, campus forums, posters or talks, and professional meetings*)?

- a) Yes
- b) No

9. If yes, how often did you participate in these events?

- a) Rarely to never
- b) Once or twice a week
- c) 3-4 times a week
- d) Every day
- e) More than once a day

10. How helpful did you find these research training events to be?

- a) Not at all
- b) Somewhat
- c) Very
- d) Extremely
- e) Does not apply

11. Did you participate in professional training activities during your time in PREP
(NOTE: *includes professional meetings with participants of MARC, Bridges, IMSD, etc, Responsible Conduct in Research trainings*)?

- a) Yes
- b) No

12. If yes, how often did you participate in these events?

- a) Rarely to never
- b) Once or twice a week
- c) Once or twice a month
- d) Once or twice a semester
- e) Once or twice a year

13. How helpful did you find these professional training activities to be?

- a) Not at all
- b) Somewhat
- c) Very
- d) Extremely
- e) Does not apply

14. Did you participate in GRE/Grad School preparative activities (NOTES: *including GRE preparation, work on letters and personal statements, mock school interviews*)

- a) Yes
- b) No

15. How often would you say you participated in GRE/Graduate School preparative activities ?

- a) Rarely to never
- b) Once or twice a week
- c) 3-4 times a week
- d) Every day
- e) More than once a day

16. How helpful did you find the GRE/Graduate School preparation activities to be?

- a) Not at all
- b) Somewhat
- c) Very
- d) Extremely
- e) Does not apply

17-21. During the average work week, how often did you have ONE-TO-ONE INTERACTION with the following people?

	Rarely to never	Once or twice a week	3-4 times a week	Everyday	More than once a day
Mentor					
Lab supervisor (leave blank if same as mentor)					
Grad students within lab					
Grad student from other labs					
Program directors					

22-26. How would you rate the interactions you've had with each of the following people?

	Very positive	Positive	Somewhat positive	Somewhat negative	Negative	Very negative
Mentor						
Lab supervisor (leave blank if same as mentor)						
Grad students within lab						
Grad student from other labs						
Program directors						

27. Generally, do you feel you have adequate support in your life to pursue a scientific career?

- a) Yes
- b) No

28. How many persons do you have in your life that you would consider to be a **career mentor** (*NOTE: Career Mentor is defined as someone who takes a personal interest in helping to develop your career as a scientist*)?

29-32. Please indicate how strongly you disagree or agree with the following statements (*NOTE: Career Mentor is defined as someone who takes a personal interest in helping to develop your career as a scientist*)?

	Strongly disagree	Disagree	Neither disagree or agree	Agree	Agree strongly
I consider my FAULTY MENTOR to be a potential career mentor.					
I consider my LAB SUPERVISOR a potential career mentor (leave blank if same as faculty mentor).					
I consider one or more of the GRADUATE STUDENTS within my lab to be potential career mentors.					
I consider PREP PROGRAM DIRECTORS to be potential career mentors.					

33-38. Please how strongly you disagree or agree with the following statements.

	Strongly disagree	Disagree	Neither disagree or agree	Agree	Agree strongly
I am confident that I could write a summary of the main points of a scientific experiment.					
I am confident that I would have a good idea of what to try next after looking at an experiment.					
I am confident that I could recognize the strengths and limitations of a specific method or test.					
I am confident that I could present an original paper at an academic/scientific conference or meeting.					
I am confident that I could develop all of the elements of research proposals.					
I am confident that I could plan and organize one individual major project (or two/three small projects).					

39-41. Please indicate how confident you are with the following statements.

	Not all confident	Somewhat confident	Pretty confident	Very confident
I am confident in my ability to apply my mathematical knowledge in the laboratory setting.				
I am confident in my mathematical knowledge.				
I am confident in my ability to gain admission to a PhD science program.				

42. Which of the following would you consider to be your strongest academic subject area?

- a) Biological sciences
- b) Chemistry
- c) Mathematics
- d) Social sciences
- e) Laboratory/seminars
- f) Engineering
- g) Other (please specify)_____

43. What would you consider to be your weakest academic subject area?

- a) Biological sciences
- b) Chemistry
- c) Mathematics
- d) Social sciences
- e) Laboratory/seminars
- f) Engineering
- g) Other (please specify)_____

44. Did you take the GRE prior to being accepted to PREP?

- a) Yes
- b) No

45. In the past year, have you re-taken the GRE?

- a) Yes
- b) No

46. How satisfied with your re-take score on the GRE?

- a) Very satisfied
- b) Satisfied
- c) Neither satisfied nor dissatisfied
- d) Dissatisfied
- e) Very dissatisfied

47-49. Please indicate if each of the following statements is true or false.

	True	False
If you take the GRE more than once, graduate schools usually only consider your highest score.		
Many graduate schools set minimum GRE score levels below which virtually no applicants are accepted.		
If you "freeze up" on the GRE, you can have your test score erased from your record.		

50-53. Please indicate how typical the following statements are in your experience.

	Not at all typical	Only somewhat typical	Quite typical of me	Very typical of me
During tests I find myself thinking of the consequences of failure.				
I do well in tests where there are time limits.				
When taking a test, I feel confident and relaxed.				
I am a poor test taker in the sense that my performance on a test does not show how much I really know about a topic.				

54-58. In the past year, how often have you engaged in the following activities.

	Often	Sometimes	Seldom	Never
Worked harder than I thought I could to meet an instructor's standards or expectations.				
I have set specific goals for my academic performance.				
I have discussed ideas from my readings or classes with others outside of class (students, family members, co-workers, etc.)				
I have worked with faculty members on activities other than coursework (committees, orientation, student life activities, etc.)				
I have discussed ideas from my readings or classes with faculty members outside of class.				

Think back to when you started the program.

59. Did you set any goals related to your participation in PREP?

- a) Yes
- b) No

60. If yes, did you reach those goals?

- a) Yes
- b) No

61-65. Please indicate how strongly you disagree or agree with each of the following statements.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Agree strongly
Spending a career working in science laboratory would be fun.					
I am worried that I do not have what it takes to be a successful research scientist.					
The idea of collaborating with other on scientific ideas, projects, and papers is highly attractive to me.					
I would be proud to be called a scientist.					
The search for scientific knowledge would be boring.					

Thank you For Completing our Survey.

PREP Scholar Post-Program Interview Questions

SCRIPT: *I am going to ask you about your satisfaction level with different components of PREP.*

1. Overall, what program activities did you find the most helpful (list to up 3)?

(Program activities include: Faculty mentor assignments, laboratory research experience, professional training activities (conferences; seminars), Individualized Career Plans; graduate school coursework.)

2. Q21: Overall, what program activities did you find the least helpful (list up to 3)?

3. Have your career goals changed since you started the program?

Yes

No

4. If yes, please describe how your career goals have changed since you started PREP.

5. Do you think having participated in the PREP program will help you to reach your career goals?

Yes

No

6. If yes, how will your participation in PREP help you to reach your career goals?

7. Overall, how satisfied were you with the quality of *professional trainings* provided?

- a. Very satisfied
- b. Satisfied
- c. Neither satisfied nor dissatisfied
- d. Dissatisfied
- e. Very dissatisfied

8. What would you do to improve the professional trainings?

9. Overall, how satisfied are you with the quality of faculty-mentor relationship?

- a. Very satisfied
- b. Satisfied
- c. Neither satisfied nor dissatisfied
- d. Dissatisfied
- e. Very dissatisfied

10. What would you do to improve this aspect of PREP?

11. Overall, how satisfied are you with your research laboratory experience?

- a. Very satisfied
- b. Satisfied
- c. Neither satisfied nor dissatisfied
- d. Dissatisfied
- e. Very dissatisfied

12. What would you do to improve the research laboratory experience?

13. Overall, how satisfied are you with your experience in the PREP program?

- a. Very satisfied
- b. Satisfied
- c. Neither satisfied nor dissatisfied
- d. Dissatisfied
- e. Very dissatisfied

SCRIPT: *Now I am going to ask a few questions specific to your faculty mentor.*

14. Would you recommend your current faculty mentor as a future faculty mentor to future PREP scholars? Why or why not?

15. What qualities do you deem important in a faculty mentor for the PREP program?

16-18. Please indicate how strongly you agree or disagree with the following statements.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
I would recommend PREP to other post-baccalaureates considering graduate school.					
I have been exposed to a variety of biomedical research areas.					
I have a more “realistic” view of what to expect as a graduate student.					

19. Were there any surprises or unclear expectations of the PREP program? If yes, please describe.

20-32. Please indicate how much time you feel you spent on various aspects of PREP program.

	Too Little Time	Right amount of time	Too much time
Taking coursework			
Preparing for the GRE			
Learning how to make a research presentation			
Attending PREP meetings			
Attending lab meetings			
Meeting with my mentor			
Interacting with PREP faculty and staff			
Helping me think about what I want to do with my life			
Working on a research project in the lab			
Developing my own research ideas			
Learning the research process (idea generation, study design, data collection, analyses)			
Computer skill building activities			
Preparing my graduate school application			

33-36. The following questions pertain to PREP staff, namely Antonio.

33. During the average work week, how often did you have ONE-TO-ONE INTERACTION with PREP staff?

More than once a day Everyday 3-4 times a week Once or twice a week Rarely to never

34. How would you rate the interactions you've had with PREP staff?

Very positive	Positive	Somewhat positive	Somewhat negative	Negative	Very negative
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35. How accessible was PREP staff when you needed their services?

Never Available Available	Rarely Available	Available Sometimes	Available	Always
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36. How could PREP staff be more helpful to PREP scholars?



The University of New Mexico

University of New Mexico Survey

PREP Faculty Mentor
Pre-Program Survey

You will spend the next year as a faculty mentor to a PREP scholar . The University of New Mexico Institute for Social Research would like to gather some information from you related to your opinions, knowledge and expectations of the PREP program. Thank you for completing this survey.

Your name: _____

1. What is your present academic title?

2. What is your tenure at the University of New Mexico?

3. Are you currently serving in an administrative position as:
 - a) Department chair
 - b) Dean (Assoc or Asst)
 - c) President
 - d) Vice president
 - e) Provost
 - f) Other
 - g) Not applicable

4. What is your highest degree earned:

5. How many total years have you served as a faculty member? (NOTE: include all institutions where you have worked).

6. How did you first learn about the PREP?

7. Why did you chose to participate as a faculty mentor for the PREP program?

8. Have you ever participated in a mentoring program as a mentee prior to participating in PREP? (NOTE: A mentee refers to a person who is the recipient of mentoring of a program.)

- a) Yes
- b) No

9. Have you participated in a mentoring program as a mentor prior to applying to PREP?

- a) Yes
- b) No

10-14. During the past two years have you engaged in any of the following activities?

	Yes	No
Advised student groups involved in service/volunteer work.		
Taught a seminar for first-year students.		
Engaged undergraduates on your research project.		
Worked with undergraduates on a research project.		
Hired a student employee.		

15-21. Rate the degree that the following impacted your decision to participate in PREP.

	Not at all	A little	A lot
I enjoy working with undergraduate students.			
I think the experience will help develop better students.			
Undergraduate students need research opportunities.			
The experience will encourage students to pursue advanced training/education.			
I think it is important to promote diversity within the higher education setting.			
I think the experience will provide students with critical research skills.			
The experience will enrich our college/university.			

22. What do you hope to gain from participating in PREP?

23-29. Please indicate how strongly you disagree or agree with each of the following statements.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
Serving as a mentor to undergraduate students is a valuable use of my time.					
Faculty members can have important effect on the direction of a student's career.					
Serving as a mentor will make me a better instructor/teacher.					
I prefer working with graduate students in the laboratory setting.					
Research assistants can make valuable contributions in the research setting.					
Many undergraduate students lack the skills necessary to engage in laboratory research.					
Many undergraduate students lack the motivation necessary to engage in laboratory research.					

30-32. Please indicate how confident you are in each of the following statements.

	Not at all confident	Somewhat confident	Pretty confi- dent	Very confi- dent
I have the ability to positively affect the lives of young scientists.				
I have the resources necessary to be an effective mentor.				
I will be able to provide PREP scholars with a valuable laboratory research experience.				

Thank you for completing our survey.



University of New Mexico Survey

PREP Faculty Mentor
Post-Program Survey

You have spent the past year serving as a faculty mentor for the PREP program . The University of New Mexico Institute for Social Research would like to gather some information from you related to your experiences in the program. Thank you for completing this survey.

Your Name: _____

1. During the average week, how often did you have ONE-TO-ONE Interaction with your PREP scholar?

- a) Rarely to never
- b) Once or twice a week
- c) 3-4 times a week
- d) Every day
- e) Every day
- f) More than once a day

2. How would you rate the ONE-TO-ONE interactions you've had with your PREP scholar?

- a) Very negative
- b) Negative
- c) Somewhat negative
- d) Somewhat positive
- e) Positive
- f) Very positive

As a part of the PREP project, you have spent the past year working in the laboratory setting with your PREP scholar. The following questions relate to the content of your ONE to ONE research meetings with your PREP scholar.

3. Did you hold research meetings with your PREP scholar?

- a) Yes
- b) No

4. If yes, how often did you participate in these meetings?

- a) Rarely to never
- b) Once or twice a week
- c) 3-4 times a week
- d) Every day
- e) More than once a day

5. What topics were most frequently addressed during your meetings with your PREP scholar?

- a) Research work/assignments
- b) Academic coursework
- c) Career support
- d) Other (please explain)_____

6. Which topics were the least frequently addressed during your meetings with your PREP scholar?

- a) Research work/assignments
- b) Academic coursework
- c) Career support
- d) Other (please explain)_____

7-13. Please indicate how strongly you disagree or agree with the following statements.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
Serving as a mentor to undergraduate students is a valuable use of my time.					
Faculty members can have important effect on the direction of a student's career.					
Serving as a mentor will make me a better instructor/teacher.					
I prefer working with graduate students in the laboratory setting.					
Research assistants can make valuable contributions in the research setting.					
Many undergraduate students lack the skills necessary to engage in laboratory research.					
Many undergraduate students lack the motivation necessary to engage in laboratory research.					

14-16. Please indicate your confidence level with the following statements.

	Not at all confident	Some-what confident	Pretty confident	Very confident
I am have the ability to positively affect the lives of young scientists.				
I have the time and resources necessary to be an effective mentor.				
I will be able to provide PREP scholars with a valuable laboratory experience.				

17. How much impact do you feel you have had on your PREP scholar (i.e., on values, school performance, resolving professional problems, etc.)?

(Circle One tremendous great somewhat very little none)

Please explain your response.

18. Overall, how satisfied are you with the research laboratory experience?

(Circle One Very satisfied Satisfied Neither satisfied or unsatisfied Dissatisfied Very dissatisfied)

Please explain your response.

19. What would you do to improve the research laboratory experience?

20. Overall, how satisfied are you with your experience in the PREP program.

*(Circle One Very Satisfied Satisfied Neither satisfied or unsatisfied
Dissatisfied Very dissatisfied)
Please explain your response.*

21. What was the most valuable part of the program?

22. How could the PREP program be made more useful for you?

23. Would you recommend participating to colleagues?

- a) Yes
- b) No

Thank you for completing our survey.