### Expected Outcomes: Undergraduate Summer Research Scholars Program

Promote excellence in undergraduate education in the cellular and molecular biosciences through undergraduate research training that involves written and oral presentation of research results from life science disciplines.

#### Assessment methods

**Method: Recruitment**

Results are used to improve efforts to recruit outstanding applicants from the Auburn University student population into the graduate ranks, and to develop effective recruitment strategies that will ultimately be aimed a regional and (or) national student pools.

**Findings:**

A total of 15 applications were received, 12 students were selected to participate, 11 accepted and 1 declined.

**How did you use findings for improvement?**

Results are also used in report to the National Science Foundation Experimental Program to Stimulate Competitive Research (NSF-EPSCoR) to promote support to augment this program.

**Additional comments:**

None

**Method: Research**

Abstract and oral presentation of 2012 USRS participants are now ready for submission to and presentation at the 2nd Auburn University Research Week during Spring semester, 2013.

**Findings:**

All Undergraduate Summer Research Scholar students participated in a colloquium in which summer research findings were shared as written abstracts and presented in a public forum as PowerPoint-based oral presentations to an audience of their peers and participating AU faculty mentors.

**How did you use findings for improvement?**

Use student research output, documented in abstracts, to promote the Undergraduate Summer Research Scholars Program and to enhance competitiveness in efforts to obtain extramural support for expansion of this program. Results are also used in reporting to the National Science Foundation Experimental Program to Stimulate Competitive Research (NSF-EPSCoR), to obtain augmentation to this program.

**Additional comments:**

None
### Expected Outcomes: Doctoral Training Program

Promote excellence in graduate education and facilitate research in the cellular and molecular biosciences through an Interdisciplinary doctoral training program through encouragement of publication and participation in professional scientific meeting at local, regional, national and international levels.

### Assessment methods

<table>
<thead>
<tr>
<th>Phase</th>
<th>Method</th>
<th>Findings</th>
<th>How did you use findings for improvement?</th>
<th>Additional comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruitment</td>
<td>Recruitment: Annual GRA</td>
<td>A total of 28 applications were received and reviewed during February, 2012. Of these, 8 applicants were recommended for acceptance (5 top candidates and 3 alternates). Offers were made to the top 5 candidates and the first alternate. The top 5 applicants accepted the fellowship offer. The first alternate declined the offer in favor of another program at another institution. This is the first time in the history of the CMB program that we were able to successfully recruit the top 5 candidates in the applicant pool. We trace this directly to a new initiative this year that raised the CMB Fellowship from $18,300 to $22,500, making the award competitive with similar fellowships from other institutions.</td>
<td>Extended recruitment efforts.</td>
<td>None</td>
</tr>
<tr>
<td>Recruitment</td>
<td>Recruitment: Summer GRA</td>
<td>A total of 33 applications were received and reviewed during February, 2012. Of these, 14 applicants were recommended and accepted the fellowship offer.</td>
<td>Extended recruitment efforts. This is the first year of this program, so we used the information in the student applications to refine our application form and criteria for ranking.</td>
<td>None</td>
</tr>
<tr>
<td>Scientific</td>
<td>Scientific Productivity: Annual GRA</td>
<td>Results are used to track progress of doctoral students.</td>
<td></td>
<td>None</td>
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</tbody>
</table>

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Through a structured performance evaluation and laboratory rotation program, data indicative of academic performance, documented by grades in coursework, and research productivity, documented through submission of written rotation summaries, were collected.

How did you use findings for improvement?

Results are used to place doctoral students in research programs appropriate to their interests.

Additional comments:

None.

Method: Scientific Productivity: Summer GRA

Results are used to track progress of doctoral students.

Findings:

This program is meant to help students still in the experimental stage of their thesis by allowing more time to devote to their research, thus helping speed up the time for graduation.

How did you use findings for improvement?

Results are used to track progress of doctoral students toward graduation.

Additional comments:

None.

Expected Outcomes: Strengthen Faculty

Strengthen, improve and retain a valued, productive faculty through enhancements of technical infrastructure, interdisciplinary communication and new faculty hires.

Assessment methods

Method: Enhance Infrastructure

Equipment and software acquisition and training have enhanced teaching and research capacity for faculty and students. Enhanced capacities are used to leverage existing resources in order to further enhance technical capabilities necessary for research competitiveness in the cellular and molecular biosciences. CMB purchased the GE LAS 4010 imaging system for ethidium bromide gels, western blots, and chemiluminescent blots, as the first step in upgrading and ultimately replacing the old Typhoon Imaging System. CMB also acquired oversight of the Laser Confocal Imaging System from the College of Engineering. CMB continues to fund service contracts and maintenance of core instrumentation in the AU-RIF.

Findings:

Improvement of scientific/technological infrastructure and facilitation of programmatic communication has enabled continued, extramural programmatic support and facilitated recruitment and retention of faculty in the life sciences. We also use the CMB infrastructure support to leverage extramural grant support from NSF-EPSCoR (in a ratio of 1:2 CMB:NSF).

How did you use findings for improvement?

Documentation of and environment conducive to development of competitive life science research/educational programs.

Additional comments:
Further action planned: Continue encourage and facilitate infrastructure development. One major instrument upgrade planned for the coming year.

**Method**: Improve Web-Based Resources

Results are used to increase awareness and involvement of program-affiliated faculty and students, and to encourage efforts to generate extramural support for program-related efforts in both research and education.

**Findings:**

Programs, seminar and research from 5 AU Colleges were promoted through the AU-CMB web site.

**How did you use findings for improvement?**

Web-based VOIP technologies will be used to maintain communication with AU-CMB affiliated satellite institutions.

**Additional comments:**

Further action planned: continue to develop/encourage use of web-based resources.