

## Low to No Cost Undergraduate Research: Mentoring Biology Students When Resources are Scarce

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### Author Biography

Dr. Amanda L. J. Duffus is an Associate Professor of Biology and a Center for Excellence in Teaching and Learning Faculty Fellow at Gordon State College. She is actively involved in undergraduate research and mentors students not only by herself, but in conjunction with other faculty. Over the past 10 years, she has mentored over 40 students who have presented at regional, national, and international conferences and has published six peer reviewed journal articles with student authors. She is happily married with a son, owned by four cats, and is a budding karate student.

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Undergraduate research (UR) is one of the Association of American Colleges and Universities' research practices (Kuh, 2008). These experiences take a variety of forms including course-based undergraduate research experiences (C.U.R.E.s), and mentoring of individuals or small groups where the student takes charge of a project or small areas of a larger project. Unfortunately, there are limited funds available for undergrad

-faculty collaborations, and have produced a multitude of student presentations.

### Description of Activity

In addition to my teaching duties, which do not include student-directed research, I work with students in small group settings (lab meetings) and individually where the students are responsible for a project or a small po

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costs, many students still cannot afford to attend. In order to overcome the costs associated with professional conferences, one great way to promote UR is to have a research day or a STEM poster hour on campus. These research events can be formal or informal. At Gordon State College (GSC), we have an annual Undergraduate Research Symposium (URS) for our students. It is organized by a committee and is a day long event that encompasses student research in all disciplines. The URS at GSC was started in 2011 and has been successful enough to be developed into a full event. There are both oral and poster presentations and these presentations are judged by faculty members, with the best presentations receiving awards.

Publishing with UR students can be especially problematic when no funding is available. Many scientific journals charge exorbitant publication fees, and relatively few have programs available to reduce the costs

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