CLIMB students were highly visible in both the Biology and Marine Science Departments, as well as other research groups that allowed the lab to function optimally. Students without disabilities and students with visible and non-visible disabilities worked cohesively and collaboratively. The students created a friendly environment that allowed the lab to function optimally.

The CLIMB Summer Research Program in the Doug Van Hoewyk Lab at Coastal Carolina University is focused on developing tomorrow’s leaders in cell and molecular biology. This program is funded by the NSF to create research opportunities for undergraduate students with physical disabilities. A stipend, housing, and transportation will be provided.

To apply: motivated students should submit a resume, unofficial transcript, and a cover letter that describes your career goals via email by April 1st. Applicants are encouraged to contact Doug Van Hoewyk to discuss the position and possible projects. Contact info: dougyh@coastal.edu or 843-349-2431

Question 2: do students have the benefits of increased diversity extend well beyond neighborhoods and classrooms? The benefits of increased diversity extend well beyond neighborhoods and classrooms; it also applies to science. Science is driven by good ideas. Diverse groups of people bring diverse ideas, which promotes scientific achievements by broadening the “idea pool.” Imagine the limited potential of discoveries if all scientists shared similar views that were shaped by homogenous life experiences.

An estimated twenty percent of Americans have a physical disability that can be either visible or non-visible. This group is woefully underrepresented in STEM disciplines and professions, including academia. The CLIMB program (Creating Leaders and Inclusion in Molecular Biology) was established in 2016 to increase diversity in STEM disciplines by recruiting undergraduate students who have physical disabilities into a 7-week summer research program at Coastal Carolina University. The CLIMB summer research program is inclusive and will provide students the support and accommodations to become future leaders in molecular biology. Students will be recruited both regionally and nationally, and selected students will perform supervised research on plant molecular biology. This year’s participants achieved proficiency in a variety of molecular biology techniques, experimental design, and data analysis; they were also able to explain what the CLIMB Core Values mean in terms of their collective impact in the field of molecular biology. This NSF-funded program positions CLIMB students to be successful in their future endeavors and to set a strong example for colleagues and future scientists in our community. Ultimately, the goal of CLIMB is to create a regionally network of scientists and professionals whose common mission is to increase the participation of undergraduate students with physical disabilities in biological disciplines.

The CLIMB (Creating Leaders and Inclusion in Molecular Biology) is a sustainable, rigorous, and inclusive summer research program to prepare our next generation of leaders and pioneers in molecular biology. We value the fact that every CLIMB Researcher brings a unique perspective, skill-set, and lived experience to our team as a whole, broadening our “idea pool” and promoting new scientific achievements.

The Van Hoewyk Laboratory will provide appropriate accommodations and a safe, flexible laboratory space to support the growth and success of all undergraduates. This program and all CLIMB Researchers will set a strong example for colleagues and future scientists in our community.

Each year, we will recruit a diverse cohort of undergraduate students including two or more people with disabilities. All students will achieve lab proficiency in a variety molecular biology techniques pertaining to a project on the ubiquitin proteasome pathway in plants. All students and faculty will be able to explain what the CLIMB Core Values mean in terms of their individual leadership and our collective impact in the field of molecular biology.

The sustainability of CLIMB hinges on the ability to share our successes with people around us. As such, we recognize that we have a responsibility to engage publicly with a wide range of supporters:

- Annual meetings
- American Society of Plant Biologists
- Association of Higher Ed and Disability (AHEAD)
- ABLE South Carolina

- Annual grant reporting (NSF)
- Local and Regional Universities
- Accessibility and Disability Services
- Community Outreach
- Local K-12 schools

The Van Hoewyk Lab is committed to ongoing progress monitoring and regular evaluation of the CLIMB Summer Research Program To ensure that we are meeting our goals and driving meaningful change in the field of Molecular Biology.

In 2019 four students were recruited into the lab. Students were trained in molecular techniques to investigate the ubiquitin-proteasome pathway in canola plants and the green algae *Chlamydomonas*. By the end of the program, students were successfully and independently performing Western Blot analysis, protein purification, flow cytometry, and fluorescent activity assays on a plate reader. Students were able to generate data that will be incorporated into scientific manuscripts.

Students without disabilities and students with visible and non-visible disabilities worked cohesively and collaboratively. The students created a friendly environment that allowed the lab to function optimally.

CLIMB students were highly visible in both the Biology and Marine Science Departments, as well as other research groups training undergrads and high school students. Formal- and informal- meetings discussed the impact of servant leadership in our lives, career development, and research and environmental ethics.

Partnering Universities: National Technical Institute for the Deaf at RIT, Ball State, Univ. South Carolina- Upstate, Coastal Carolina University.

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