



Finding Summer Research Opportunities

UROC: Undergraduate Research Opportunities Center

Scholarship, leadership, and achievement through:

- Real-world research experience
- Mentoring from disciplinary experts
- Conference presentations & publications
- Professional development and networking training
- Graduate school preparation



McNair
Scholars Program
CALIFORNIA STATE UNIVERSITY, MONTEREY BAY

- We're glad to have **you** here!
- **You** are the target of many research programs!
 - Smaller universities
 - All levels of research experience
 - Diverse social and educational backgrounds
- How can you be strategic as you pursue opportunities?
 - Fit & Match!

Welcome!



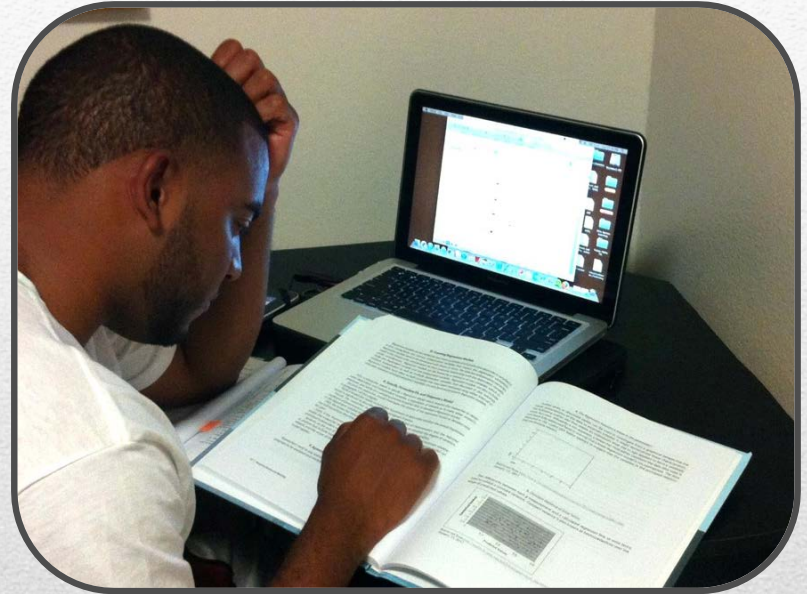
AGENDA

1. Why undergraduate research?
2. Who provides these opportunities? Why?
3. How do I find opportunities?
4. How do I apply?



WHY UNDERGRADUATE RESEARCH?

- **Q1. What is your major?**
- **Q2. How does your field define “research”?**



Discussion


UROC's Definition:

Undergraduate research is an inquiry or investigation conducted by an undergraduate student that....

- addresses a specific research question,
- utilizes appropriate research methodologies,
- adheres to the standards of the discipline,
- and results in the dissemination of findings.

*Get help! Ask for guidance from people who have experience. Choose the **right** programs for you.*

What is Research?

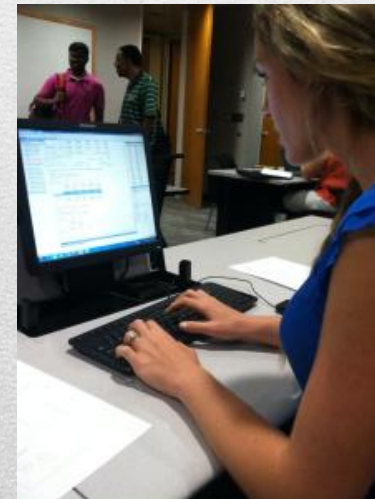
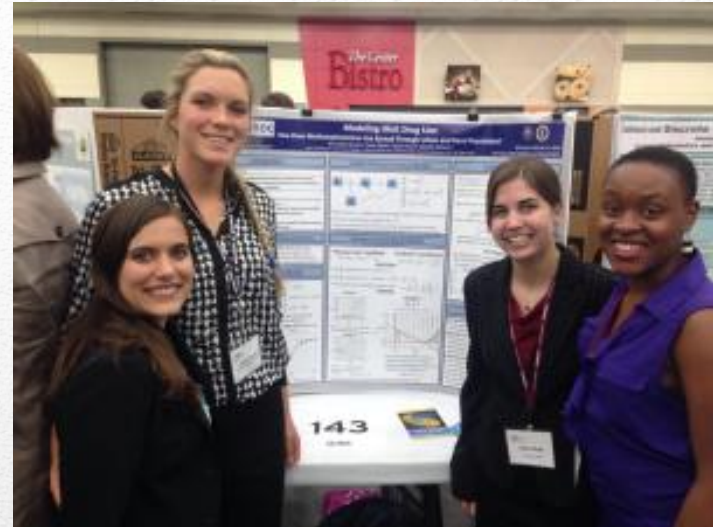
- 
- Explore fields of interest
 - Develop knowledge and discipline-specific skills
 - Acquire hands-on experience in a research environment
 - Networking and professional development
 - Prepare you for graduate school
 - Potential for travel and visiting new areas

Benefits of Undergraduate Research

Lilyana Gross '15

- Major: Mathematics
- Minor: Statistics
- Mentor: Dr. Judith Canner

- Two summer research experiences that helped shape her goal to pursue a Masters degree at the Colorado Public Health.
 - Summer Program in Quantitative Sciences in Biostatistics, School of Public Health, Harvard University.
 - Undergraduate Researcher, North Carolina State University



Student Profile

Karly Beavers '15

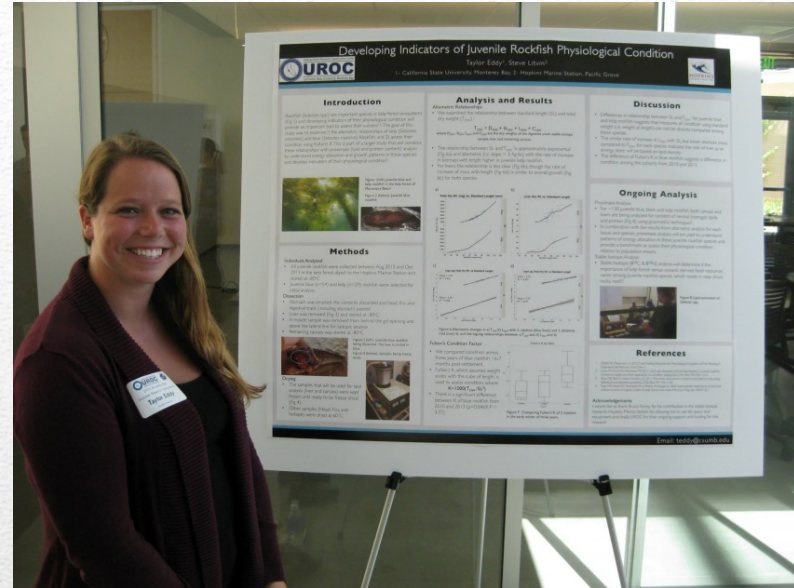


- ‘UROC and the McNair Scholars program have helped me in graduate school more than I ever thought possible. Not only do I feel more prepared than my fellow students to manage assignments, but *my previous research experience allows me to stand out from the crowd.* ...[M]y teacher called me out in front of class with a name drop. “Karly knows about this as she’s worked on some of this research.” Having previous involvement with faculty really sets me apart from other students...’

Student Profile

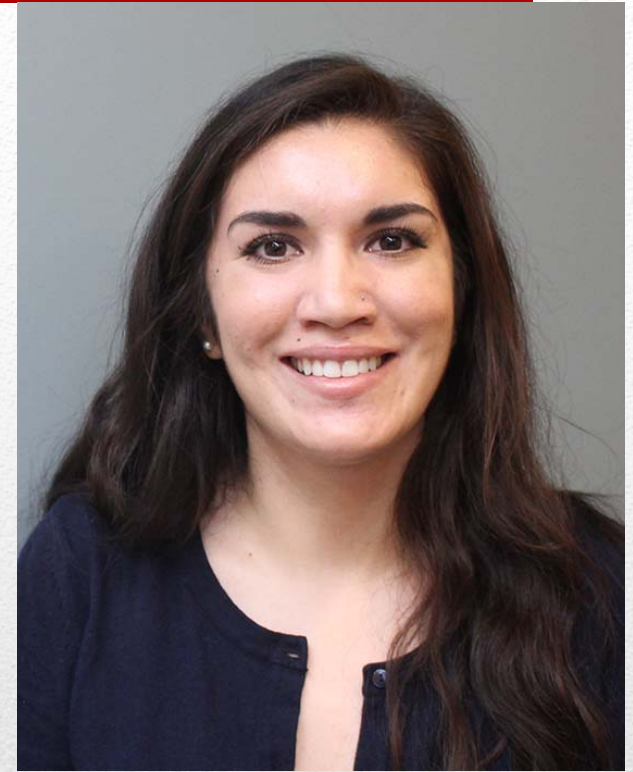
Taylor Eddy, Fall '15

- Accepted into the Monterey Bay Ocean Sciences REU Summer '14
- Research at Moss Landing Marine Labs
- Connections she made led to another opportunity to become a researcher at Hopkins Marine Station
- Won an award for her research presentation at the Coastal and Estuarine Research Federation conference 2016
 - *Developing indicators of physiological condition in juvenile rockfish (Sebastes spp.)*



Student Profile

- First in family to attend college
- 2014 McNair Scholars program
- First research experience, Ohio State University molecular genetics and biochemistry REU program
- 2015 Sally Casanova Pre-Doctoral Scholar
- 2016 NSF Graduate Research Fellowship Program
- Starting PhD UC Santa Cruz Fall 2016



Student Profile: Elisabeth Carrillo

Biology Major, Graduated Fall 2015

- Returning student, first in family to attend college
- 2014 McNair Scholars program
- Brokered own summer research on community-based art through contact met at Imagining America conference
- 2016 CSUMB Presidents Award



Starting Masters Kennesaw State University Fall 2016

- ePortfolio: <https://thelizapproach.wordpress.com/>

Elizabeth Hensley

Human Communications Major, Graduated 2016

13

- From Salinas Valley, first in family to attend college, McNair Scholar
- Academic-year and summer research with USDA on pesticide alternatives
- Connected his research with Service Learning to educate field works about protection from pesticides
- 2015 Sally Casanova Pre-Doctoral Scholar
- Currently USDA Research Technician

Continuing research at UC Davis

ePortfolio: <https://julmartinez.wordpress.com/>

Julio Martinez

Biology Major, Graduated Fall 2015





WHO PROVIDES THESE OPPORTUNITIES?

And Why?



A strong undergraduate research experience can help YOU:

- Move along a developmental trajectory toward independence, originality, and autonomy
- Develop critical thinking, inquiry, communication, and analytical skills
- Contribute to real-world research and communicate findings
- Prepare for graduate school and career

Typical Program Structure:

- 8-10 weeks during the summer at research institution
- Stipend for travel and expenses (usually)
- Lodging (food/housing/etc) paid (usually)
- Research mentor provides guidance and support
- Academic workshops and professional development opportunities (e.g. GRE prep, student panels, communication training, grad school recruitment)
- Research seminars and facility tours
- Research symposium to present summer research
- Sometimes support to present at national conferences



Typical Research Experience 17

Summer Research Opportunities Application Season

January

February

February 15th
February 30th

March

March 1st
March 15th

April

May

Timing is everything...



LOTS of Universities

Who provides these opportunities? Why?

- Developing the next generation of scientists and scholars
- Giving undergrads a chance to excel, apply the skills and knowledge they are developing in their courses
- Increase diversity and representation in research disciplines
- Recruit students to go to graduate school at the research institution
- Give opportunities for research to students from smaller institutions that may have less research opportunities

Who provides these opportunities? Why?



HOW DO I FIND OPPORTUNITIES?

- STEM: Science, Technology, Engineering, & Math
 - *Sometimes* this includes Psychology, not always
- Generally more STEM undergraduate research programs

STEM vs. Non-STEM

- Pathways to Science: <http://www.pathwaystoscience.org>
 - Over 1500 STEM programs!
- NSF REU List: <http://www.nsf.gov/crssprgm/reu>
- Federal Opportunities for Undergraduate Students: <http://stemundergrads.science.gov/>
- NASA One Stop Shopping Initiative (OSSI): <https://intern.nasa.gov>
 - Guide to Getting Started: https://intern.nasa.gov/documents/Students_Getting_Started_2016.pdf
- Department of Energy, National Laboratories
 - Oak Ridge Institute for Science & Education (ORISE): <http://orise.orau.gov/>

STEM

- **NSF-REU List:** <http://www.nsf.gov/crssprgm/reu>
 - [Social, Behavioral, and Economic Sciences](#)
 - [Education and Human Resources](#)
 - [Ethics and Values Studies](#)
- **Leadership Alliance SR-EIP:** <http://www.theleadershipalliance.org>
- **BTAA (Big Ten Academic Alliance) SROP**
 - <https://www.btaa.org/students/srop/introduction>
- **Independent University Programs**
 - Acronyms like SURF/SURP/SURE/STARS/SRP/SIP

Non-STEM

- These are *very worth* searching for!
- A hunting game...
 - Search for Universities with graduate programs that focus on your interests
 - Search those Universities for “undergraduate research opportunities”
 - The acronyms! SURF/SURP/SURE/STARS/SRP/SIP

Independent University Programs

- Biomedical Data Science Research Program

- <https://csumb.edu/bd2k>

- Visiting CSUMB students will spend the summer working side-by-side with UCSC scientists and data specialists, learning research skills to manage and interpret genomic data.

- Eligibility: Biology, Comp Sci, & Math or Statistics majors

- Application open now; **Deadline Feb 9, 2018**

- Program dates: June 24 – August 18, 2018



BD2K Summer Undergraduate Research Program



Monterey Bay Regional Ocean Science
Research Experiences for Undergraduates

- Monterey Bay Regional Ocean Science Research Experiences for Undergraduates
 - <https://csumb.edu/reu>
- 2-3 spots (of 11) reserved for **CSUMB students!**
- Application now open; **Deadline: Feb 16, 2018**
- Program dates: early June – mid August

Ocean Sciences REU @ CSUMB

- **Finding Research Opportunities:**

<https://csumb.edu/uroc/find-research-opportunities>


- Positions advertised here as available
- Applicants may apply for summer research funding through UROC

- **UROC @ CSU Monterey Bay:**

<https://www.facebook.com/uroc.csumb>

- Research, scholarships, workshops, etc advertised here.

UROC Research Opportunities

- 
- Doris Duke Conservation Scholars program
 - Costa Rica Summer Research Expedition
 - Also... LSAMP – Makes STEM majors from underrepresented backgrounds extra eligible!

**So many more
opportunities**



HOW DO I START MY SEARCH?

Develop a search strategy

- Define what you want to get out of a research experience
- Create a list of keywords that describe your discipline and research interests


Activity



HOW DO I APPLY?

- **Building Your Academic Resume: Resumes, CVs, and the Academic Resume**
 - Wednesday, February 6, 2-3:30pm
- **Personal Statement Writing for Undergraduate Research Opportunities**
 - Tuesday, February 13, 2-3:30pm
- **Finding Summer Research Opportunities**
 - Wednesday, February 14, 2-3:30pm
- **I Started My Application... Now What?: Summer Research Application Review Drop-in**
 - Thursday, February 15, 11-12:30pm


UROC Workshops @ UROC

- 
- Research focus and associated faculty
 - Eligibility and requirements
 - Time commitment
 - Location
 - Stipends
 - Travel, housing, and living costs
 - Networking and professional development opportunities

How to choose?

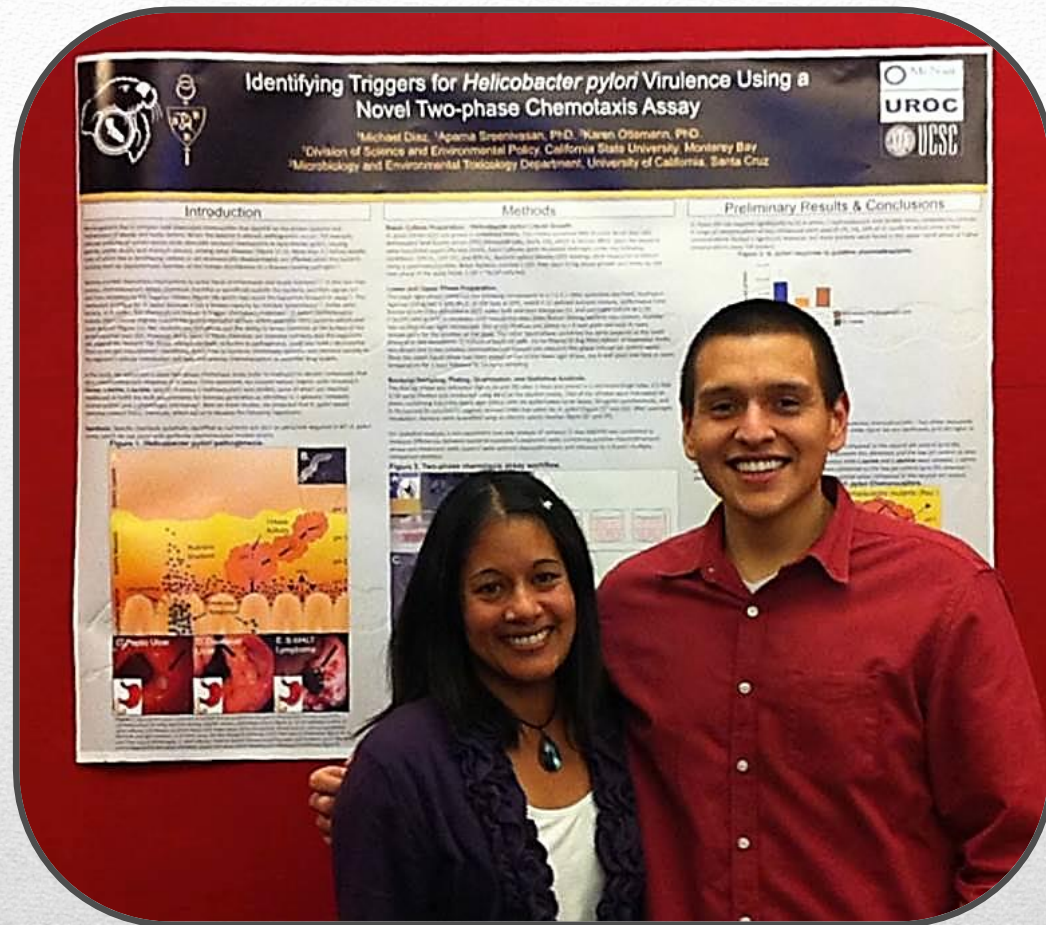
- **Get organized:** review eligibility requirements and application deadlines
- Review program information and identify specific mentors or research projects that interest you
- Seek input from faculty, peers, and family
- Begin drafting letters and statements
- Request recommendation letters and transcripts **as early as possible**

Steps for Applying

- 
- Application Form
 - Academic Resume or Curriculum Vitae (CV)
 - Personal Statement or Essay
 - Academic Transcripts
 - Letters of Recommendation

Typical Application

What are reviewers looking for?



Discussion

- Include *relevant* academic and work experiences, honors, leadership activities, and skills and training
- Sell yourself – highlight content that will impress your audience
- Write active descriptions of experiences focusing on accomplishments and ‘end products’
- Customize your resume or CV for your audience
- Use consistent formatting so that your resume or CV looks professional and information is easy to find

Academic Resume or CV

Strive for

- What did you do, accomplish, or contribute?
 - Conducted
 - Investigated
 - Designed
 - Developed
 - Determined

Avoid

- Passive phrasing with no ownership
 - Worked with...
 - Gained understanding...
 - Assisted with...
 - Enabled me to...
- Laundry lists of duties

- AKA “statement of purpose,” “cover letter,” “letter of intent,” “personal narrative,” etc., or may be in the form of a series of essay questions
- Carefully address specific prompts and tailor essays to individual programs
- Avoid cliché and simple biographies
- Talk about your specific skills and experiences and how they lead to your goals.

Personal Statements

General Prompts:

- What are my academic and career goals? What is my purpose and motivation to achieve these goals?
- Why have I chosen this program or institution?
- Why am I an excellent fit for this program?
- What preparation and personal attributes do I have that demonstrates I will succeed? What can I contribute to the program and institution?
- How will my participation help me achieve my academic and career goals?

Personal Statements

Brainstorm your personal statement

- List the attributes you have that will allow you to succeed as a researcher
- What motivates you to pursue undergraduate research, and how does research relate to your goals?
- What training and experiences have prepared you to participate?

Activity

- Build relationships with potential letter writers
- Choose letter writers carefully
- Provide letter writers ample time
- Provide letter writers with necessary information:
 - Program description and instructions for submitting letter
 - Your application materials
 - Information you wish for them to include in their letter
- Send reminders and thanks

Recommendation Letters

Plan your letter requests

Attribute	Letter 1	Letter 2	Letter 3

Activity



(831) 582-4241
2nd Floor of Library, Suite 2150

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FB posts
multiple times
a week!

Thanks! & Learn More

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