



**APPLICATION FOR THE YEAR 2021  
SUMMER UNDERGRADUATE RESEARCH PROGRAM**

**June 7, 2021- August 20, 2021**

**APPLICATION DEADLINE: Monday, February 22, 2021 to  
Dr. Eric Hill, AHN 127**

- REQUIREMENTS:**
1. Participation in weekly seminar/lunches, including giving one presentation.
  2. Final poster report.

Name: \_\_\_\_\_ Student I.D. # \_\_\_\_\_  
(Please Print Legibly)

Local Address: \_\_\_\_\_ Current Local/Cell Telephone #: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ ( ) \_\_\_\_\_ - \_\_\_\_\_  
\_\_\_\_\_

Email Address (that is checked regularly) \_\_\_\_\_

Cumulative GPA: \_\_\_\_\_ Major: \_\_\_\_\_ Minor: \_\_\_\_\_

Status:  First Year  Sophomore  Junior

**Below are signatures from at least one and up to four faculty whom you have talked to, whom you would consider working with this summer, and that you match their qualifications if applicable. Once your application has been submitted, the faculty will decide, based on interest, skills, and finances, which students to accept. You should rank your choices with most preferred being #1. (Remember the FACULTY must have signed this form.)**

		<b>your ranking</b>
_____	_____	<input type="checkbox"/>
<b>Print Name</b>	<b>Signature of faculty</b>	
_____	_____	<input type="checkbox"/>
<b>Print Name</b>	<b>Signature of faculty</b>	
_____	_____	<input type="checkbox"/>
<b>Print Name</b>	<b>Signature of faculty</b>	
_____	_____	<input type="checkbox"/>
<b>Print Name</b>	<b>Signature of faculty</b>	



# SUMMER RESEARCH FACULTY 2021

This list contains the Science Center faculty who may take students this summer. You will see their names, a very general description of their research, and any qualifications they expect of students who apply to work with them. Please go talk to any of them who interest you before filling out the application form.

*Note: Some research plans and availability may depend on pandemic conditions.*

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## BIOLOGY

- [These biology faculty will **NOT** be taking students this summer: *Silveira, Linda; Olson, Lisa; Ryan, Bryce; Malcolm, James*]

Aronson, Ben..... The complement system of the immune system is capable of killing some microorganisms but not others. The cell wall seems to be the key feature that distinguishes susceptible from resistant microorganisms. Students on this project will examine whether perturbations to the cell wall of resistant microbes can lead to susceptibility.

Blauth, Jim..... Game-camera monitoring of native mammal and human activity in open space reserves in south Redlands; statistical analysis of game camera data and/or survey/monitor other kinds of organisms. In collaboration with Malcolm and Vanoverbeke - Comparing non-chemical methods of non-native plant control in grassland restoration; plant/animal/soil surveying/sampling/analysis, native seed collecting, and watering treatment protocols. Students should have completed BIOL 238 or EVST 100.

Forristall, Caryl..... Xenopus developmental biology: Investigating the effect of pollutants on sexual development.

Stelle, Lei Lani..... Marine Mammal Behavioral Ecology, (will only consider students who have prior experience studying marine mammals (e.g. have volunteered on my project; students can begin volunteering during this Spring)

Vanoverbeke, Dustin In collaboration with Blauth and Malcolm - Comparing non-chemical methods of non-native plant control in grassland restoration; plant/animal/soil surveying/sampling / analysis, native seed collecting, and watering treatment protocols. Focus on pollinator and ground arthropod surveys. Students should have completed BIOL 238 or EVST 100 and have personal transportation.

- Biomedical research at Loma Linda is possible for three to four students. Those interested in applying should talk to Bryce Ryan

## CHEMISTRY

- [These chemistry faculty will **NOT** be taking students this summer: *Ferracane, Michael; Longin, Teri; Schrum, David; Soulsby, David*]

Lyons, Rebecca..... Collection and analysis of organic pollutants in air and water. Students need to have taken Chem 232.

## Environmental Science

- [These environmental science faculty will **NOT** be taking students this summer: *McIntyre, Wendy*]

Jenkins, Hillary..... Tree rings and extreme drought, spatio-temporal patterns of water distribution, quality, and scarcity in southern California, fire recovery in forested ecosystems of Southern California, ongoing hydrologic and vegetation monitoring in montane meadows in the San Bernardino. Must have taken at least one course with H. Jenkins in order to apply.

## MATH/CS

- [These mathematics/computer science faculty will **NOT** be taking students this summer: *Bieri, Joanna; Chakrapani, Pani; Beery, Janet; Bentley, Jim; Cornez, Rick; Cornez, Trish; Koonce, Sandy; Veenstra, Tamara*]

Morics, Steve..... Conditions for monotonicity failure in ranked choice voting elections or other projects in mathematics and voting; projects in combinatorics.

## PHYSICS

Eric Hill..... Scanning Tunneling Microscopy (STM) and Scanning Electron Microscopy (SEM), or supporting other topics of your interest. Students need to have completed Phys 231-233.

Martin Hoecker-Martinez...Fluid-flow projects with rotating tank and preparing for Climate Physics FYS.

Alan DeWeerd..... Quantum Optics or Quantum Conduction. Students need to have completed Electronics Applications (PHYS 310).