On the Cover

Eric Ramirez (SURF ’11)
University of Puerto Rico - Bayamon

Mentor: Nira Ben-Jonathan, PhD
Dept: Cancer and Cell Biology

PhD Program: Cancer and Cell Biology
Lab Focus: Breast Cancer
Research: “Prolactogen as Biomarker for Breast Cancer Treatment”
SUMMER UNDERGRADUATE RESEARCH FELLOWSHIP PROGRAMS
AT THE UNIVERSITY OF CINCINNATI COLLEGE OF MEDICINE

Are you an undergraduate science student, interested in biomedical research and thinking about a future in Biomedical Sciences? We have several summer programs that can help you get the experience you need to prepare for graduate school in the College of Medicine and a career in this expanding field. All told, we bring in over 150 undergraduate students from all over the U.S. each year.

1. **OGE SURF**: Summer Undergraduate Research Fellowship
   Office of Graduate Education
   Website: [http://med.research.uc.edu/SURF.aspx](http://med.research.uc.edu/SURF.aspx)
   Email: resgraed@uc.edu

2. **CCHMC SURF**: Summer Undergraduate Research Fellowship
   Cincinnati Children's Hospital
   Website: [http://www.cincinnatichildrens.org/education/research/surf/default](http://www.cincinnatichildrens.org/education/research/surf/default)
   Email: sherry.thornton@cchmc.org

3. **MSTP SURF**: Summer Undergraduate Research Fellowship
   Medical Scientist Training Program (MD/PhD)
   Website: [http://med.uc.edu/mstp/summerintern.cfm](http://med.uc.edu/mstp/summerintern.cfm)
   Email: lauram.mayleben@uc.edu

4. **Neuro SURF**: Summer Undergraduate Research Fellowship in Neuroscience
   Graduate Program in Neuroscience
   Website: [http://neuroscience.uc.edu/summer](http://neuroscience.uc.edu/summer)
   Email: sharon.weber@uc.edu

5. **ASPET SURF**: American Society of Pharmacology and Experimental Therapeutics, Summer Undergraduate Research Fellowship in Pharmacology, Toxicology, & Pharmaceutical Sciences
   Department of Pharmacology and Cell Biophysics
   Website: [www.med.uc.edu/pharmacology/aspet.surf](http://www.med.uc.edu/pharmacology/aspet.surf)
   Email: schultjo@uc.edu

RESEARCH AVAILABLE WITHOUT APPLYING FOR SUMMER PROGRAM

It is also possible to participate in biomedical research at UC by contacting our researchers individually and requesting summer employment. Even if you are not participating in a specific program, you will be invited to participate in many of our summer events and activities.
THE RESEARCH

We are on the threshold of amazing scientific discoveries that promise greater progress than ever before. As we enter the post genome era, we strive to discover new biomedical knowledge to help us understand the molecular basis of human disease and develop the next generation of therapeutic agents. We use the modern tools of functional genomics (bioinformatics, gene array, proteomics and unique animal models of human disease) to pursue these answers at the level of genes and gene products.

Our research enterprise at the University of Cincinnati is immense. Faculty members from all departments, centers of excellence and institutes in the College of Medicine, and from laboratories across the entire UC Academic Health Center, mentor over 150 undergraduate student researchers each summer. Ongoing research features nearly any area of biomedical investigation you can think of – some of our biggest research areas include cardiovascular and pulmonary disease, cancer, neuroscience and neurodegenerative disorders, developmental disorders, metabolic disorders and immunobiology and infectious diseases.

Our SURF programs request that you indicate what type of research you are interested in. This is mainly to help us place you with a laboratory. You will be asked to describe the areas of biomedical research that interest you, and to list 1 or more specific faculty members at the University of Cincinnati College of Medicine and Cincinnati Children's Hospital with whom you would like to work. You may reference the following websites to read about faculty research:

1) UC COM Departments: http://med.uc.edu/departments
2) Cincinnati Children's Hospital: www.cchmc.org
3) UC COM PhD Programs (See Faculty List for each program): http://med.research.uc.edu/GraduateEd/GraduatePrograms.aspx

The Graduate Program list will direct you to faculty at UC COM and Children's Hospital who have a long history of mentoring research trainees, and who are very interested in mentoring our new summer undergraduate research interns.

RESEARCH PRIORITY AREAS

The College of Medicine has identified certain areas of biomedical research as being of particular priority to our research enterprise, both for their predominance in our overall research enterprise, as well as for being important areas of future investment. As a result, there are investigators working in these research priority areas within just about each and every department in the college of medicine.

While some of our summer programs, as described in the pages that follow, offer opportunities in very specific areas of research, you will find that nearly all of our summer programs can offer you an opportunity to participate in research in the following areas:

- Cancer Biology
- Cardiovascular Biology
- Pulmonary Biology
- Immunobiology
- Neuroscience, Neurology
- Metabolic Disorders
- Gastrointestinal & Epithelial Biology
- Developmental & Neonatal Biology
- Environmental Health
- Molecular Genetics
- Biochemistry
- Microbiology

State-of-the-science tools/resources:
- Transgenics
- Genotyping
- Phenotyping
- Genomics
- Proteomics
- Bioinformatics
- Imaging
THE EXPERIENCE

As a summer student researcher, you will meet students from around the country who have come to Cincinnati to explore a career in biomedical research!

Exciting and diverse opportunities in basic science await you – hands on experience in one of our cutting edge laboratories, working under the supervision of our world renowned biomedical research faculty, and taking full advantage of the opportunities available to you in a professional research environment.

Our famous Summer Research Welcome Picnic is the official Opening Event for our summer programs, usually held on the first day of the Summer Semester, but the summer programs have a variety of start and end dates. Some of the programs allow you to start whenever you want (with the permission of your mentor) as long as you complete the required number of weeks in your program. As a coordinated group, the SURF programs in the College of Medicine arrange many academic, social and cultural activities throughout the summer, so no matter which SURF program you enter, you will have many opportunities to meet and get to know students across programs.

You will be invited to participate in many academic activities, including Scientific Writing seminars, an Ethics in Research seminar, and an Introduction to Bioinformatics course. You will also be able to participate in research seminars and laboratory meetings. At the end of the summer, the College of Medicine hosts a Capstone Poster Symposium for summer researchers, which includes a featured Keynote Speaker who will present a scientific talk. Some individual summer programs host an additional poster session for the students in their program.

To help you meet and get to know other summer student researchers, you will have the opportunity to participate in a variety of organized cultural and social activities throughout the summer. You might get to go on a canoe trip or to a Reds game; spend a day at the Cincinnati Zoo and Botanical Gardens or King's Island; see a concert at Riverbend Music Center, or a play at the modern downtown Aronoff Theatre or at the Playhouse in the Park.

CAMPUS LIFE

Living on campus at UC this summer, you will get to enjoy MainStreet, which includes our state-of-the-art Campus Rec Center (CRC), Steger Student Life Center, and Tangeman University Center (TUC), all just a 5 minute shuttle ride from the Academic Health Center (East Campus).

Please go to www.uc.edu/mainstreet for more info (including a list of movies showing at the MainStreet Cinema).

Summer Semester memberships to the Campus Rec Center are available to all non-UC college students for about $90 if you show your own college ID.

For a flash tour of the Campus Rec Center, visit: http://magazine.uc.edu/explore/crctour.html

HEALTH INSURANCE

Summer fellows (who are not enrolled as students at UC) should also be sure to arrange for health insurance coverage, as you will not be covered by UC Student Health Insurance. Health care is available on a fee-for-service basis through the University Student Health Service, and these fees may or may not be reimbursable by your personal insurance, so we recommend that you contact your insurer to confirm this prior to coming to UC. Emergency care is available at all of our Affiliate Hospitals (http://health.uc.edu/health/programsaff/programaffiliates.html), including the University of Cincinnati Medical Center (UCMC), which is a highly ranked emergency facility that is located on our Academic Health Center Campus, adjacent to the Medical Sciences Building (http://universityhospital.uchealth.com/).

PARKING

On-campus parking is available to our summer researchers at student prices. Please go to: www.uc.edu/parking for more information.

STUDENT SERVICES

Other informative websites for students are listed at: www.uc.edu/students.html.

We hope YOU will join us at UC for an exciting and stimulating summer of scientific exploration!
HOW TO APPLY
Apply online for Summer Undergraduate Research programs at:
http://webcentral.uc.edu/gradresearch/surf/summerapp.cfm

SURF DEADLINES:

- Applications must be submitted/edited electronically by February 16, 2014 at 5:00pm Eastern Standard Time (EST).
- Resumés must be uploaded by February 16, 2014 at 5:00pm EST.
- Grade Reports must be uploaded by February 26, 2014 at 5:00pm EST.
- Letters of recommendation must be requested electronically by February 16, 2014 at 5:00pm EST.
- Recommenders may submit letters electronically as late as February 26, 2014 at 5:00pm EST.

The February 16, 2014 - 5:00 p.m. EST deadline applies to all Summer research programs listed on the application form.

Due to rolling admissions, it is recommended that you complete your application as early as possible to guarantee full consideration.

Apply online at: http://webcentral.uc.edu/gradresearch/surf/summerapp.cfm
Please answer all questions as completely as possible and submit the application with your resume attached.

Deadline: Application must be submitted online by 5:00 pm EST on February 16, 2014.

INSTRUCTIONS:

1) GO TO: http://webcentral.uc.edu/gradresearch/surf/summerapp.cfm
2) SUBMIT: First Name; Last Name; Email address; Date of Birth
3) START YOUR APPLICATION
4) SAVE APPLICATION: you will have the option to upload your Resume and Grade Report after your initial SAVE.
5) RECOMMENDATION LETTER: Please get permission from your recommender right away so that he or she has time to write your letter. That way you already have their permission when you enter their name and contact information in your SURF application.
6) After submitting your application for the first time, you will receive an email with instructions to log back in and request your letters. When you log in for the second time, you will not be permitted to edit your application until you have hit the SEND REQUEST button to send a request to your recommender for a letter.
7) As soon as you hit SEND REQUEST, your recommenders will receive an email from SURF with instructions on how to submit a letter electronically.
8) Please inform your references that they will receive an email from our office which will direct them how to upload a letter of recommendation into the SURF application system on your behalf. Letters of Recommendation must be uploaded by your recommender by 5:00 pm (EST) on February 26, 2014. Only one letter is required, but we recommend that you request two in order to ensure that at least one is received by the deadline.

9) GRADE REPORT: Please do not send these documents to the SURF Program via mail. Grade Report (or transcript) does not need to be official; it may be copied from your school website or prepared by you, but should include a list of courses taken and grades received. Applicants may be required to submit an official transcript at a later date, at the discretion of the SURF Program Director and/or Faculty reviewers.

Completion of your Application
When your documents have been received, they will be uploaded into your SURF application file, and your Application Status will be updated as appropriate.
All documents received by the 5:00 pm (EST) February 16, 2014 deadline will be uploaded into the system within two weeks.

Final Submission for Review:
You will be able to update or revise your online application prior to final submission. When all of your official documents have been received, your application status will be "COMPLETE" and ready for Final Submission.
When your application status is listed as Complete, you must perform the final submission of your application by clicking on the Final Submit button.
After you hit FINAL SUBMIT, you will no longer have access to edit your application and it will become available to faculty for review.

Completed Applications will be reviewed on a rolling basis, so it is beneficial to complete the Final Submission of your application as early as possible.

ESSAYS:
You will find 3 essay questions in the online application. Please answer in as much detail as needed to describe the following:

- Your motivation to pursue research and how biomedical research (including summer experience at UC) fits into your educational and career goals;
- The specific areas of research that interest you; please indicate if there is a particular investigator or laboratory to which you would prefer to be assigned. If you have no preference, you may list a few potential mentors - faculty members whose work interests you. You may need to review faculty websites on the COM Department websites at www.med.uc.edu/departments or refer to a listing of graduate programs at www.med.research.uc.edu. (To review faculty at Cincinnati Children's Hospital, visit the Pediatrics Department or the Graduate Programs in Immunobiology or Molecular and Developmental Biology.)
- Each prior research experience, including the dates of participation, the program name, the name of the institution/organization, and the name of your research mentor. Include a brief description of your research and whether you presented a poster, presentation, paper, etc.)
Multiple applications: You may apply for as many summer research programs as you wish by simply checking the appropriate boxes on the application. Please be sure to provide research interests appropriately for each program to which you have applied.

References: One letter of recommendation is required. You must supply contact information for two references - at least one of whom must submit electronically a letter of recommendation for you. Your reference letter should be written by someone who can evaluate your potential for biomedical research. The letter must be submitted electronically. The application system will automatically send one request for a letter to each reference provided by the applicant. It is the responsibility of the applicant to ensure that at least one recommender submits a letter by the February 26 application deadline.

CV/Resumé should be attached electronically to your application.

*PLEASE NOTE: The February 16 deadline for initial submission of your application applies to all programs. Each program has a limited number of fellowships to award. For full consideration, it is recommended that you complete your application as early as possible. Materials sent by mail (US Postal Service, UPS, FedEx, etc.) must be postmarked by February 26.

QUESTIONS? The Office of Graduate Education coordinates summer undergraduate research programs throughout the UC College of Medicine and sponsors the Online Application, the Calendar of Events and many of the summer activities and events.

Office of Graduate Education
University of Cincinnati College of Medicine
PO Box 670548
231 Albert Sabin Way
Medical Sciences Bldg; Room 2005
Cincinnati OH 45267-0548
VOICE: 513.558.7341
FAX: 513.558.2850
www.med.uc.edu/SURF

Administration & Staff:
Robert F. Highsmith, PhD, Sr. Associate Dean and Director
Robert Brackenbury, Ph.D., Co-Director, Graduate Programs (resgraed@uc.edu)
Iain Cartwright, Ph.D., Co-Director, Graduate Programs (resgraed@uc.edu)
Lisa Griffith, SURF Program Coordinator (resgraed@uc.edu)
Matt Schauseil, Asst. Dir. Academic and IT/Website Manager (schausrm@uc.edu)

If you would like to contact Lisa by phone, she can be reached at (513) 558-5626.

Cancer

Julie Tritschler (SURF ’11)
Xavier University (OH)
Mentor: Yana Zavros, PhD
Dept: Molecular & Cellular Physiology

PhD Program: Systems Biology and Physiology
Lab Focus: Gastric Cancer
Research: “Role of Sonic Hedgehog* as a Regulator of the Immune Response During Gastric Ulcer Healing Using A Luminex-Based Multiplex Assay”
*One of 3 proteins in the cell signaling pathway family called “hedgehog”
Summer Undergraduate Research Fellowship (OGE SURF)
Office of Graduate Education
www.med.research.uc.edu

PROGRAM DESCRIPTION
The OGE SURF program offers exciting research opportunities in our most distinguished laboratories across every department in the College of Medicine and Cincinnati Children's Hospital. If you already know who you would like to work with, you may indicate your preference in your application. If you aren't sure where you would like to be placed, try to narrow down your field of interest as much as possible, because we have many experienced mentors in just about every area of biomedical science you can think of, waiting to introduce you to the world of research.

As an OGE SURF fellow, you will work with your mentor to design a research project within the context of the research currently being done in the mentor's laboratory. Selection of the research may be geared toward projects that can result in a student-authored poster presentation, while allowing you to participate fully in both basic and advanced molecular techniques.

ELIGIBILITY
Fellowships are competitive and available to undergraduate college students who have a commitment to pursue a career in research in biomedical sciences. The successful summer applicant has a GPA over 3.3 (4.0 scale) and has completed at least one academic year of general biology, general chemistry and/or physics, as well as some mathematics courses. Priority is given to students with Junior status. Criteria for selection include academic record, reference letter, and a stated inclination towards graduate training in biomedical sciences and a future career in research. Previous research experience is helpful, but not a requirement; a clear description of research interests is essential.

AWARD NOTIFICATION: Award notifications begin in February; award selections are made until all available positions are filled.

AWARD: The number of Fellowships awarded will depend on our internal funding. The stipend for OGE SURF fellows is $4000 and is paid about halfway through the program (around week 5). The stipend should be enough to reimburse you for travel to Cincinnati and your living expenses for the summer. UC dormitories require payment upon arrival.

LAB PLACEMENT PROCESS: As soon as you accept our Fellowship Award offer, we initiate the process to match you with an investigator who will mentor your summer research experience.
1) Matching is dependent upon two things:
   a. Specific information from you regarding area of interest/potential mentors
   b. Availability of your mentor of choice
2) We would like to match you with a mentor as soon as possible to ensure that the investigator listed in your application is available (if not, we will begin a search for an investigator in the same research area).

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
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<tbody>
<tr>
<td>Immunology</td>
<td>Amanda Harrell (SURF '11) Ohio University</td>
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<tr>
<td>Mentor: Monica McNeal, MS Assoc Dir, Laboratory of Specialized Clinical Studies</td>
<td>Dept: Pediatrics (CCHMC) Division of Infectious Diseases</td>
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<tr>
<td>Lab Focus: Virology; immunology and vaccine development</td>
<td>&quot;G and P Types of Rotavirus Strains Causing Diarrhea in Bangladesh from 1985 to 1986&quot;</td>
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3) When an investigator is offered a potential mentee, he or she will sometimes wish to speak to the student before committing to mentorship.

4) Upon the investigator’s confirmation of your placement, we will send you his or her contact information and request that you consult with your mentor regarding any special arrangements that need to be made prior to starting in the lab.

PROGRAM DATES: The OGE SURF Program typically runs from late May thru early August. You commit to 10 weeks of full time participation in the laboratory and may make arrangements with your mentor regarding your schedule. To coordinate your schedule with important events like the Summer Capstone Poster Symposium, please visit www.med.research.uc.edu/SURF.aspx.

TRAVEL/HOUSING: The Fellowship Award is intended to reimburse you for travel and living expenses for the 10 weeks, with enough left over to enjoy your summer in Cincinnati! Modern housing facilities are available on the UC campus in the Stratford Heights complex. More information regarding dormitories is available at www.med.research.uc.edu/SURF/SummerHousing.aspx

QUESTIONS? Please contact:

Programs, Research, Mentors:
Robert Brackenbury, Co-Director-Graduate Programs (robert.brackenbury@uc.edu)
Iain Cartwright, Co-Director-Graduate Programs (iain.cartwright@uc.edu)

Dorms, Calendar of Events, General info:
Lisa Griffith, SURF Program Coordinator (griffilt@uc.edu)

Website, Application system:
Matt Schauseil, Asst. Dir., Academic (IT/Web Manager) (schausrm@uc.edu)

Summer Undergraduate Research Fellowship
Office of Graduate Education
University of Cincinnati College of Medicine
PO Box 670548
231 Albert Sabin Way
Medical Sciences Bldg; Room 2005
Cincinnati OH 45267-0548
VOICE: 513.558.5626
FAX: 513.558.2850

Neurology
Charles Penik (SURF ’05)
Oakwood University
Mentor: Joseph Clark, PhD
Dept: Neurology

Lab Focus: neuroprotection from cerebral vascular damage following stroke
Summer Undergraduate Research Fellowship (CCHMC SURF)
Cincinnati Children’s Hospital Research Foundation
http://www.cincinnatichildrens.org/education/research/surf/default

The ultimate goal of this program is to provide students with an excellent research foundation for making career choices in the biomedical sciences. In 2013, over 90 students participated in the program. Fellows work with their identified mentor and others in their laboratories to learn basic techniques and to conduct a research project. Over 600 faculty work in all areas of pediatric medicine, including the study of developmental biology, congenital disorders, inherited diseases, cancer, immunology, clinical and biomedical informatics, etc. The program is usually 10 weeks in length, although this can vary based on individual circumstances. In addition to the hands-on laboratory experience, our students participate in various social and academic activities with students from the various other summer programs at the University of Cincinnati College of Medicine.

ELIGIBILITY
Summer fellowships are competitive for undergraduate students in their freshman, sophomore or junior years of college. Applicants should have a minimum of a 3.0 GPA and interest in pursuing a career in biomedical research or medicine. Criteria for selection include academic record, answers to essay questions and interest in obtaining research experience. Specified area(s) of research interest can help place selected students in an appropriate laboratory or clinical setting. It is suggested that applicants review our website (http://www.cincinnatichildrens.org/research/default) to determine areas of interest.

AWARD NOTIFICATION: Award selections begin in January and continue until all available positions are filled. Students are placed on a rolling admission basis starting in January.

AWARD: The stipend for Summer 2014 is approximately $3500.

LAB PLACEMENT PROCESS: Students are placed with mentors matching their indicated research interests and availability of positions in specific laboratories.

PROGRAM DATES: The CCHMC SURF program has no official start or end date; you are committing to 10 weeks of full time participation in the laboratory and may make arrangements with your mentor regarding your schedule. To coordinate your schedule with important events like the Summer Capstone Poster Symposium, please visit www.med.research.uc.edu/SURF.aspx.

PROGRAM DESCRIPTION

CCHMC SURF

QUESTIONS? Please contact:
Sherry Thornton, Ph.D., Director
(513) 636-1318
sherry.thornton@cchmc.org

Karen Steffen, SURF administrator
(513) 636-8603
karen.steffen@cchmc.org

Melissa Bowman (SURF ‘11)
Manchester College (IN)

Mentor: James Mulloy, PhD
Dept: Pediatrics
CCHMC Division of Experimental Hematology

PhD Program: Molecular & Developmental Biology
Lab Focus: Molecular mechanisms in leukemia; mouse modeling of leukemia using primary human blood stem cells

“The Contribution of ETO to t(8;21) Leukemia”
Summer Undergraduate Research Fellowship Program (MSTP SURF)
The Medical Scientist Training (MD/PhD) Program
http://med.uc.edu/mstp/summerintern.cfm

PROGRAM DESCRIPTION
This program is designed and provides experience for individuals who have a potential interest in combined MD/PhD training. It offers hands-on research experience in a medical school setting, with concomitant opportunity to determine how that research can contribute to the understanding and treatment of disease. Each intern is matched with an appropriate faculty advisor based on mutual research interests. The advisor and intern design a research project within the context of the current research in the advisor's laboratory, which can result in a student-authored publication. Each intern is also teamed with a physician who they can shadow on ward rounds, and clinical service and view operations. In addition to medically relevant research, the program includes an orientation picnic, weekly journal club meetings with students in the MD/PhD combined-degree program and tours of the research and clinical facilities at both the University and Cincinnati Children's Hospital Medical Center. The program concludes with a mini-symposium where students present their research findings to their peers at a poster presentation. The MSTP SURF program has proven to be an ideal way to introduce undergraduates to the requirements of combined degree training and the professional opportunities for future Physician-Scientists.

ELIGIBILITY
The internships are designed for talented undergraduate sophomore or junior science majors who are interested in both basic science research and clinical medicine.

AWARD NOTIFICATION: Award notifications begin in February; award selections are made until all available positions are filled.

AWARD: The internship provides a $4000 fellowship for 10 students for the ten week period.

PLACEMENT PROCESS: As soon as you accept our Fellowship Award offer, we initiate the process to match you with an investigator who will mentor your summer research experience.
1) Matching is dependent upon two things:
   a. Specific information from you regarding area of interest /potential mentors.
   b. Availability of your mentor of choice

Immunology

Cameron McDaniel (SURF ’11)
Adrian College (MI)

Mentor: Alison Weiss, PhD
Dept: Molecular Genetics, Biochemistry and Microbiology

PhD Program: Molecular Genetics, Biochemistry and Microbiology
Lab Focus: Virology; Novel therapeutic approaches to counter anthrax and Shiga toxin
2) We would like to match you with a mentor as soon as possible to ensure that the investigator listed in your application is available (if not, we will begin a search for an investigator in the same research area).

3) When an investigator is offered a potential mentee, he or she will sometimes wish to speak to the student before committing to mentorship.

4) Upon the investigator’s confirmation of your placement, we will send you his or her contact information and request that you consult with your mentor regarding any special arrangements that need to be made prior to starting in the lab.

**PROGRAM DATES:** The ten week program typically runs from late May through early August

**QUESTIONS?** Please contact:

- Laurie Mayleben, Program Coordinator
  (513) 558-2380
  lauran.mayleben@uc.edu

- Andrew Herr, PhD, Associate Director, Admissions & Recruitment
  University of Cincinnati College of Medicine
  Medical Scientist Training Program
  P.O. Box 670548
  MSB Room 2401AA
  Cincinnati, OH 45267-0524

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**Immunology**

**Aarion Gross (SURF ’11)**
Oakwood Univ (AL)

- Mentor: David Hildeman, PhD
- Dept: Pediatrics (CCHMC)
- Division: Immunobiology
- PhD Program: Immunobiology
- Lab Focus: T-cell response
- Research: “Assessment of Dendritic Cell Antigen Presentation During CNS Viral Infection”
Summer Undergraduate Research Fellowship Program (Neuro SURF)
Graduate Program in Neuroscience
http://neuroscience.uc.edu/summer

PROGRAM DESCRIPTION
The Neuroscience Graduate Program provides summer stipends to undergraduate students interested in cutting-edge research in several disciplines of neuroscience. Selection to Neuro SURF provides fellows with a unique hands-on training with faculty mentors within the Program. Our primary goal is to provide our fellows with an excellent research experience that will serve as a foundation for making career choices in the Neurosciences. In the past years we have recruited 10-15 students annually to work with their identified mentor and other laboratories to learn basic techniques to conduct an independent research project. Over 80 faculty work in multiple areas of Neuroscience including the study of neurological and psychiatric disorders, obesity, addiction, neurotoxicity, pain, development, etc. The Program is usually 10 weeks in length and ends with a Capstone Poster Presentation event. Students present and discuss their data and compete for awards. In addition to hands-on laboratory experience, our students participate in various social and academic activities with students from other summer programs within the University.

ELIGIBILITY
Neuro SURF fellowships are competitive for undergraduate students in their sophomore and junior years of college. Applicants should have a minimum GPA of 3.0 and have completed at least general biology, general chemistry and/or physics as well as some mathematics and/or statistics courses. Criteria for selection include academic record, letters of recommendation and a personal statement. Students with a strong desire to attain graduate training in neuroscience/biomedical research are encouraged to apply.

AWARD: The stipend amount is $4000 for the 10-week program in Summer 2014 (or pro-rated at $400/week). This should cover all of your living expenses for the summer in Cincinnati.

QUESTIONS? Please contact:
Sharon Weber, Program Coordinator
(513) 558-6225
sharon.weber@uc.edu

Renu Sah, PhD: Director, Neuro SURF
(513) 558-5129
sahr@uc.edu

Kim Seroogy, PhD: Director, Neuroscience Graduate Program
(513) 558-7086
kim.seroogy@uc.edu

James Eliassen, PhD: Assoc. Director, Neuroscience Graduate Program
(513) 558-5863
james.eliassen@uc.edu

Neurology
Abigail Feresten (SURF ’10)
Oberlin College
Mentor: Gail Pyne-Geithman, PhD
Dept: Neurosurgery
Lab Focus: acute brain and vascular injury after intracranial hemorrhage
The 10-week summer residential full-time ASPET SURF provides research training opportunities for 5 trainees who are interested in pursuing advanced research degrees (MS, PhD) in pharmacology, toxicology, and pharmaceutical sciences upon graduation. Faculty mentors with active research programs are located in the Colleges of Medicine and Pharmacy, and at the Genome Research Institute-Drug Discovery Unit.

Our ASPET SURF program offers an intellectually and scientifically rigorous faculty-mentored research training that incorporates contemporary laboratory approaches, technologies, and issues relevant to scientific discoveries and their translational applications. The SURF program includes seminars and lectures in parallel with in-depth hands-on laboratory research experiences. A professional opportunities program as well as a social program round out the ASPET SURF summer experience.

SURF students will be trained in research and laboratory and research project specific methods, techniques and relevant literature. The SURF student will receive necessary laboratory safety training and complete required laboratory and university procedure certifications during the first week in the laboratory. The SURF student will be expected to learn quickly and apply skills to contribute to the faculty mentor’s research program by completing the goals of the research project. The supervised or co-supervised faculty mentor team and their laboratory research team members will provide daily guidance and weekly review of the SURF research project progress. Students will be appointed as ASPET Dalton/Zannoni Fellows and will be enrolled as student members of the American Society of Pharmacology and Experimental Therapeutics.

ELIGIBILITY
Applicants who express interest in pursuing advanced graduate degrees (MS, PhD) in pharmacology, toxicology, and pharmaceutical sciences will be selected from a regional and national competitive pool with distinguished academic records that have completed at least two full academic years of university courses as full-time students.

Students who have completed 2 years of academic study in accredited college or university and have declared a major subject of study that logically would prepare them as a viable graduate degree program applicant will be given priority consideration.

A complete Grade Report and letters of recommendation from two faculty members familiar with
the applicant’s academic performance and/or potential for a career in biomedical research are requisite components of the application. An official academic transcript may be requested. Student cumulative GPA, scope of courses, letters of recommendations and your statement of how this SURF Program will assist you in achieving your goals of completing an advanced graduate degree (MS or PhD) leading to a career in pharmacology, toxicology, or pharmaceutical sciences will be given strong emphasis in applicant selection. While previous research experience is not a requirement, the placement process will be improved if a description of any previous experience is included. The selection committee will review applications and rank applicants for appointment offers.

**AWARD:** $4,000

**AWARD NOTIFICATION:** Award selections begin in March and continue until all available positions are filled.

**LAB PLACEMENT PROCESS:** During April 2014 students will be placed with mentors matching their indicated research interests and availability of positions in specific laboratories.

**PROGRAM DATES:** June 2 – August 8, 2014. Students must be available for the entire 10 week program.

**TRAVEL/HOUSING:** At student’s expense. Housing recommendations will be sent to accepted students - the new Stratford Heights complex on the UC campus is both convenient and very well-appointed.

**QUESTIONS? Please contact:**

Jo El Schultz, PhD, Director  
(513) 558-9754  
schuljo@uc.edu

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**Immunology**

Ana' Brown (SURF 2011)  
Jackson State University (MS)

Mentor: Sherry Thornton, PhD  
Dept: Pediatrics (CCHMC)  
Division: Rheumatology

PhD Program: Immunobiology

Lab Focus: Evaluating targets for the treatment of rheumatic disease

Research: “In vitro Suppression of INF-gamma by Angiopoietin-like 4, a Novel Arthritic Mediator”