2014 Summer Fellows

Work-in-Progress Presentations

August 25 & 26, 2014
The Summer Undergraduate Research Fellowship program (SURF L&S) is a donor-supported initiative designed to allow Berkeley undergraduates in the College of Letters and Science to spend the summer doing concentrated research in preparation for a senior thesis or another major capstone research project.

The Summer Undergraduate Research Fellowship Rose Hills program (SURF Rose Hills), established in 2012 and supported by the Rose Hills Foundation, allows undergraduate students from Southern California in selected science and engineering majors to spend the summer gaining research experience by apprenticing with a faculty mentor or doing concentrated research on a project of their own design.

For program details, and profiles of this year’s cohort, go to surf.berkeley.edu.

The Summer Undergraduate Research Fellowship programs are administered by the Office of Undergraduate Research and Scholarships (research.berkeley.edu), part of the Undergraduate Division of the College of Letters and Science. The programs are made possible through the support of our generous donors.

Special thanks in 2014 to:

The L&S Leadership Fund
The Pergo Foundation
The Rose Hills Foundation
Dr. Dirk Thye and Nicole Thye
The Wishek Endowment
The anonymous donors supporting the Anselm and JSB Funds
## 2014 Summer Fellows
### Schedule at a Glance

### Monday, August 25th

**9:00 - 10:30AM**  
**Opening Plenary**, 2060 VLSB

**10:45 - 12:00PM**  
**Panel 2A**, 2040 VLSB  
Adolescence, Precarity, Nationalism, and the Black Plague

**Panel 2B**, 2060 VLSB  
It's a Dengue Outbreak!

**12:00 - 2:00PM**  
**Lunch**, VLSB Courtyard

**12:30 - 2:15PM**  
**Poster Session**, 2063 VLSB

**2:30 - 3:45PM**  
**Panel 4A**, 2040 VLSB  
Missionaries, Queer Identity, Military Detention, and Urban Farms

**Panel 4B**, 2060 VLSB  
Thinking about the Brain

**4:00 - 5:15PM**  
**Panel 5A**, 2040 VLSB  
Students, Athletes, Workers, and Factories

**Panel 5B**, 2060 VLSB  
Controlling Seizures, Modeling Protein Interactions, and Quantum Computing

### Tuesday, August 26th

**9:00 - 10:15AM**  
**Panel 6A**, 2040 VLSB  
Moral Framing, Transit Reform, Amphibians, and Algorithms

**Panel 6B**, 2060 VLSB  
Shining Light on the Mysteries of the Brain

**10:30 - 11:45AM**  
**Panel 7A**, 2040 VLSB  
How Cells Talk to Each Other in Cancer and Stress

**Panel 7B**, 2060 VLSB  
What’s New with Aging, Novel Superoxide Probes, and Quieting Protein Expression

**11:45 - 12:45PM**  
**Lunch**, VLSB Courtyard

**12:45 - 2:00PM**  
**Panel 8A**, 2040 VLSB  
Art, the Prose Poem, and Internet Speak

**Panel 8B**, 2060 VLSB  
Dark Matter and Toric Degenerations

**2:15 - 3:30PM**  
**Panel 9A**, 2040 VLSB  
From Nature: Bacterial Photosynthesis, Reconstructing Old Landscapes, Saving the Wines, and Gecko-inspired Bandages

**Panel 9B**, 2060 VLSB  
You Can Tell a Lot by What Genes You Wear

**3:45 - 5:15PM**  
**Closing Plenary**, 2060 VLSB
Monday, August 25, 2014

8:30-9:00   Coffee and Welcome
            Onderdonk Lobby, Valley Life Sciences Building

9:00-10:30  Session 1
            Opening Plenary Session
            2060 Valley Life Sciences Building

Kaylee Mann, Electrical Engineering & Computer Sciences
SURF Rose Hills Experience Junior Fellow
An Ocellar-Based Flight Control System for Flying Insect Biobots
Faculty Mentor: Michel Maharbiz, Electrical Engineering & Computer Sciences

Amy W. Clark, English
SURF L&S Anselm Fellow
More than Meets the Eye: A Textual Examination of Old English Color Resonances
Faculty Mentor: Emily Thornbury, English

Nadir Bilici, Molecular & Cell Biology; Education minor
SURF Rose Hills Independent Senior Fellow
Characterizing Dopamine D1R and D2R Expressing Neurons in the Medial Prefrontal Cortex
Faculty Mentor: Mu-Ming Poo, Molecular & Cell Biology

Berké Brown, Interdisciplinary Studies
SURF L&S Wishek Fellow
The Internal Gym: Engaging Intrinsic and Extrinsic Variables of Motivation in Exercise Self-Efficacy
Faculty Mentor: William Satariano, Public Heath

Welcoming Remarks: Catherine Koshland, Vice Chancellor for Undergraduate Education

Moderators: Emily Thornbury, Associate Professor, English
            Andrei Popescu, Postdoctoral Fellow, Mu Ming Poo Lab

10:30-10:45  Break
            Onderdonk Lobby, Valley Life Sciences Building

10:45-12:00  Session 2A
            Adolescence, Precarity, Nationalism, and the Black Plague
            2040 Valley Life Sciences Building
Alexander Kraft, English
SURF L&S Anselm Fellow
Soft Boiled Detectives: The Hardy Boys and the Rise of the Teenager
Faculty Mentor: Kathleen Moran, American Studies

Dylan Grant, English
SURF L&S Anselm Fellow
Boxed In: Precarity and Affect in Coupland and Wallace
Faculty Mentor: Celeste Langan, English

Yu-Han Serena Ma, History
SURF L&S JSB Fellow
"Who are we?": Japanese History Textbooks and the Creation of a National Identity
Faculty Mentor: Andrew Barshay, History

Caitlin Lowe, English; Latin American Studies minor
SURF L&S Anselm Fellow
Losing My Religion: Evidence of Religious Construction in Black Plague Literature of the Early Modern Period
Faculty Mentor: Kevis Goodman, English

Moderator: Kathleen Moran, Senior Lecturer and Associate Director, American Studies
Discussant: Kim Thien Tran, PhD Candidate, Ethnic Studies Clinical Trials

10:45-12:00 Session 2B
It’s a Dengue Outbreak!
2060 Valley Life Sciences Building

Alexander Kim, Molecular & Cell Biology; Global Poverty & Practice minor
SURF Rose Hills Independent Junior Fellow
Identification of Dengue α-NS1 Antibodies for Low Cost Diagnostics and Immunotherapy
Faculty Mentor: Eva Harris, Public Health

Meghana Eswarappa, Molecular & Cell Biology; South Asian Studies minor
SURF L&S Thye Fellow
Cell-Free Nucleic Acids as Biomarkers for Shock in Human Dengue
Faculty Mentor: Eva Harris, Public Health

Surbhi Trivedi, Molecular & Cell Biology
SURF Rose Hills Independent Senior Fellow
Dengue Virus Intrahost Diversity in Human Infections
Faculty Mentor: Eva Harris, Public Health
Louis Lau, Molecular & Cell Biology
SURF Rose Hills Independent Senior Fellow
Characterizing Anti-DENV Serum IgG Avidity Profiles after Live Attenuated Vaccine Clinical Trials
Faculty Mentor: Eva Harris, Public Health

Moderator: Eva Harris, Professor, Public Health

12:00-2:00 Lunch
Valley Life Sciences Building Courtyard

12:30-2:15 Session 3 Poster Session
2063 Valley Life Sciences Building

Group 1
Sravya L. Chilukuri, Molecular & Cell Biology; Public Policy minor
SURF Rose Hills Experience Sophomore Fellow
Confirming the Presence of Functional CatSper Ion Channels in Primate and Rat Sperm Cells
Faculty Mentor: Polina Lishko, Molecular & Cell Biology

Previn Ganesan, Molecular & Cell Biology
SURF Rose Hills Experience Junior Fellow
IQGAP’s Mechanism and Role in Vascular Function
Faculty Mentor: Mallar Bhattacharya, UCSF: Pulmonary and Critical Care

Min Young Huh, Electrical Engineering & Computer Sciences
SURF Rose Hills Experience Sophomore Fellow
Analyzing and Experimenting with Acoustic Laser Wave Guide
Faculty Mentor: Maysamreza Chamanzaz, Electrical Engineering & Computer Sciences

Sara Ratican, Molecular & Cell Biology
SURF Rose Hills Experience Junior Fellow
Calcium Imaging in Drosophila Melanogaster
Faculty Mentor: Kristin Scott, Molecular & Cell Biology

Chasen Sherman, Mechanical Engineering
SURF Rose Hills Experience Junior Fellow
Modeling and Manufacturing of Microfluidic Diodes for Lab-on-a-Chip Applications
Faculty Mentor: Liwei Lin, Mechanical Engineering
Kendall Russell Wong, Molecular & Cell Biology
SURF Rose Hills Experience Sophomore Fellow
Calcium-Sensitive Dosimeters to Monitor Neuronal Activity
Faculty Mentor: Evan Miller, Chemistry and Molecular & Cell Biology

Judges: Kevin Yamauchi, PhD Student, Bioengineering
Hector Neira, PhD Student, Bioengineering

Group 2
Katherine Chen, Microbial Biology
SURF Rose Hills Experience Junior Fellow
The Role of Hypoxia-inducible Factor 1-alpha during Mycobacterium marinum Infection of Macrophages
Faculty Mentor: Sarah Stanley, Public Health

Gregory Chin, Molecular & Cell Biology
SURF Rose Hills Experience Sophomore Fellow
Albumin-Induced Reactive Astrocytosis Following Blood-Brain Barrier Disruption: A Model for Age-Related Seizure Susceptibility
Faculty Mentor: Daniela Kaufer, Integrative Biology

Sung Won Han, Molecular & Cell Biology; Chinese minor
SURF Rose Hills Experience Junior Fellow
c-Met and β1 Integrin: A Receptor Complex Driving Invasive Resistance to Anti-angiogenic Therapy
Faculty Mentor: Manish Aghi, UCSF: Neurological Surgery

Grace Lee, Bioengineering
SURF Rose Hills Experience Junior Fellow
Exploring the Effects of miRNA200s in Non-Small Cell Lung Cancer Metastasis
Faculty Mentor: Lin He, Molecular & Cell Biology

Jay Ramsay, Integrative Biology
SURF Rose Hills Experience Junior Fellow
Clinical Effect of Blueberries on DNA Damage/Repair and Apoptosis
Faculty Mentor: Bruce Ames, Molecular & Cell Biology

Jerry Xiao, Bioengineering
SURF Rose Hills Experience Sophomore Fellow
Applications of Human Pluripotent Stem Cell-Derived Dopaminergic Neurons in Treating Parkinson’s Disease in Rodents
Faculty Mentor: David Schaffer, Bioengineering

Judges: Anum Azam, PhD Candidate, Bioengineering
Martha Lesniewski, PhD Student, Bioengineering
Group 3

Amit Akula, Computer Science; Bioengineering minor
SURF Rose Hills Experience Junior Fellow
Applications of the California Report Card Collaborative Assessment Engine for Reproductive Health and Disaster Preparedness
Faculty Mentor: Ken Goldberg, Electrical Engineering & Computer Sciences

Michael Forsuelo, Chemical Engineering and Mathematics; Materials Science minor
SURF Rose Hills Experience Junior Fellow
Artificial Photosynthesis: Ultrafast Charge Separation in Molecular Polyads
Faculty Mentor: K. Birgitta Whaley, Chemistry

Gabriel Kaufman, Nuclear Engineering and Electrical Engineering
SURF Rose Hills Experience Sophomore Fellow
Characterization of Delayed Fluorescence in Mixed Single-Crystal Organic Scintillator Materials
Faculty Mentor: Bethany Goldblum, Nuclear Engineering

Zachary Lentz, Engineering Physics
SURF Rose Hills Experience Junior Fellow
Bouncing Droplet
Faculty Mentor: Reza Alam, Mechanical Engineering

Winston Pouse, Physics
SURF Rose Hills Experience Sophomore Fellow
Development of Kinetic Inductance Phonon Sensors
Faculty Mentor: Bernard Sadoulet, Astrophysics

Wendy (Wen-Whei) Tang, Statistics; Chinese minor
SURF Rose Hills Experience Junior Fellow
Revolutionizing Multiple Sclerosis Treatment: Data Mining Electronic Medical Records
Faculty Mentor: Pierre-Antoine Gourraud, UCSF: Neurology

Neil Thomas, Engineering Mathematics & Statistics; Chemistry minor
SURF Rose Hills Experience Junior Fellow
Assessing the Effect of Haplotype Phasing Error on Demographic Inference
Faculty Mentor: Yun S. Song, Electrical Engineering & Computer Sciences, Statistics, and Integrative Biology

William Tokumaru, Physics; History minor
SURF Rose Hills Experience Sophomore Fellow
Surface Ion Traps for Scaling Quantum Information Processing: Multipole Controls and Surface Analysis
Faculty Mentor: Hartmut Haeffner, Physics
Judges: Benjamin Horowitz, PhD Student, Physics
Todd Doughty, PhD Candidate, Physics
Jeremy Mardon, Postdoctoral Fellow, Stanford Institute for Theoretical Physics

2:15-2:30 Break
Onderdonk Lobby, Valley Life Sciences Building

2:30-3:45 Session 4A
Missionaries, Queer Identity, Military Detention, and Urban Farms
2040 Valley Life Sciences Building

Hoa Francisco Ngo, Anthropology
SURF L&S JSB Fellow
The Sacred and the Secular: Catholic Missionary Work in the Land of the Rising Sun
Faculty Mentor: Charles Hirschkind, Anthropology

Kelley O’Dell, Middle Eastern Studies and Near Eastern Studies
SURF L&S Wishek Fellow
A Tale of Two Websites: Exploring Gendered Navigations of Sexual Identities in Amman, Jordan
Faculty Mentor: Emily Gottreich, History and International & Area Studies

Omar El-Qoulaq, Political Economy
SURF L&S JSB Fellow
Military Detention in the West Bank: An Examination of Israeli Democracy
Faculty Mentors: Hatem Bazian, Near Eastern Studies, and Saba Mahmood, Anthropology

Asia Tallino, American Studies; Global Poverty & Practice minor
SURF L&S JSB Fellow
Faculty Mentor: Kathleen Moran, American Studies

Moderator: Kathleen Moran, Senior Lecturer and Associate Director, American Studies
Discussant: Hatem Bazian, Lecturer, Near Eastern Studies
2:30-3:45  
**Session 4B**  
Thinking about the Brain  
2060 Valley Life Sciences Building

**Jeni Hagan, Public Health**  
SURF L&S Pergo Fellow  
Impact of Individual Motor System Variability on Motor Learning  
Faculty Mentor: Richard Ivry, Psychology

**Matthew Boggess, Cognitive Science and Computer Science**  
SURF L&S Pergo Fellow  
Developing a Model of the Basal Ganglia and Cerebellum  
Faculty Mentor: Richard Ivry, Psychology

**Nicole Goldberg-Boltz, Psychology**  
SURF L&S Pergo Fellow  
Investigating Inhibitory Effects of the Pre-SMA in a Response Inhibition Paradigm  
Faculty Mentor: Robert Knight, Neuroscience

**Jimmy Yin, Psychology; Computer Science minor**  
SURF L&S Leadership Fellow  
Investigating the Effects of Trait Anxiety Vulnerability on Fear Association to Compound Stimuli  
Faculty Mentor: Sonia Bishop, Psychology

**Moderator:** Amal Achaibou, Postdoctoral Fellow, Sonia Bishop Lab

3:45-4:00  
**Break**  
Onderdonk Lobby, Valley Life Sciences Building

4:00-5:15  
**Session 5A**  
Students, Athletes, Workers, and Factories  
2040 Valley Life Sciences Building

**Larry E. McDaniel Jr., Sociology**  
SURF L&S Wishek Fellow  
Afrocentric Curricula: A Powerful Enough Force to Curtail Negative Classroom Behavior?  
Faculty Mentor: Kristin Luker, Sociology and Law

**Sean Khalifehzadeh, Sociology**  
SURF L&S Wishek Fellow  
Fourth and Goal: A Comparative Analysis of Student-Athlete Educational Experiences  
Faculty Mentor: Linus Huang, Sociology, and Kristin Luker, Sociology
Jason Budge, Interdisciplinary Studies; Global Poverty & Practice minor
SURF L&S Leadership Fellow
We Own It, We Run It: Do Worker Cooperatives Resolve the Problems of Alienation?
Faculty Mentor: Sean Burns, International & Area Studies

Natasha von Kaenel, Interdisciplinary Studies; Creative Writing minor
SURF L&S JSB Fellow
How Does Art Exhibition and Production Impact the Community Support for a Recovered Factory in Buenos Aires, Argentina?
Faculty Mentor: Margaret Weir, Political Science and Sociology

Moderator: Margaret Weir, Professor, Political Science and Sociology
Discussant: Sean Burns, Director of Student Programs, Blum Center Lecturer, International & Area Studies

4:00-5:15 Session 5B
Controlling Seizures, Modeling Protein Interactions, and Quantum Computing
2060 Valley Life Sciences Building

Benjamin Zhang, Engineering Physics and Applied Mathematics
SURF L&S Pergo Fellow
Attenuation of Epileptic Seizures via Anderson Localization
Faculty Mentor: Reza Alam, Mechanical Engineering

Miles Rusch, Engineering Physics
SURF Rose Hills Experience Junior Fellow
Quantum Gate Optimization
Faculty Mentor: K. Birgitta Whaley, Chemistry

Henry Kilgore, Chemistry
SURF Rose Hills Independent Junior Fellow
Unveiling Bio-activity: A Computational Approach to the Bioaction of Leukotriene B6
Faculty Mentor: Karsten Gronert, Vision Science

Aditya Vignesh Venkatramani, Physics and Applied Mathematics
SURF L&S Pergo Fellow
Imaging Quantum States of Light
Faculty Mentor: Irfan Siddiqi, Physics

Moderators: Irfan Siddiqi, Professor, Physics
K. Birgitta Whaley, Professor, Chemistry
Tuesday, August 26, 2014

8:45-9:00  Coffee and Welcome
Onderdonk Lobby, Valley Life Sciences Building

9:00-10:15  Session  6A
Moral Framing, Transit Reform, Amphibians, and Algorithms
2040 Valley Life Sciences Building

Edgar Cook, Political Science and Sociology
SURF L&S Wishek Fellow
Changing Views on Gun Control: The Effects of Moral Framing and Ingroup Conformity on Attitudes Towards Gun Laws
Faculty Mentor: Laura Stoker, Political Science

Diwen Shen, Economics and Statistics
SURF L&S Wishek Fellow
Travel Mode Shift Since the 2007 Beijing Public Transit Fare Reform
Faculty Mentor: Calanit Kamala, Economics

Meg Perret, Gender & Women's Studies, Interdisciplinary Studies, Integrative Biology
SURF Rose Hills Independent Junior Fellow
Amphibians, Agency, and Affect: On the Production of Scientific Knowledge in the Anthropocene
Faculty Mentor: Carolyn Merchant, Environmental Science, Policy & Management

Rodrigo Ochigame, Interdisciplinary Studies
SURF L&S JSB Fellow
Political Representation in Information Filtering Algorithms
Faculty Mentor: James Holston, Anthropology

Moderator: Mary Crabb, Program Coordinator, Stronach Baccalaureate Prize
Discussant: Laura Stoker, Associate Professor, Political Science

9:00-10:15  Session  6B
Shining Light on the Mysteries of the Brain
2060 Valley Life Sciences Building

Richard Hakim, Molecular & Cell Biology
SURF Rose Hills Independent Senior Fellow
Acute Optogenetic Activation of Peripheral Nociceptors
Faculty Mentor: Hillel Adesnik, Molecular & Cell Biology
Shannon Leslie, Molecular & Cell Biology
SURF Rose Hills Independent Junior Fellow
Frontotemporal Dementia and the Endolysosomal System
Faculty Mentor: Michael Ward, UCSF: Neurology

Taylor A. Vega, Integrative Biology; Education minor
SURF Rose Hills Independent Senior Fellow
Exploring the Interactions of the Default Mode Network and Salience Network Using EEG
Faculty Mentor: Andrew Kayser, UCSF: Neurology

Carson M. Quinn, Neurobiology; Philosophy minor
SURF L&S Pergo Fellow
Activity Dependence of Synaptic Maturation and Axon Refinement in Zebrafish Visual Circuits
Faculty Mentor: Ehud Isacoff, Molecular & Cell Biology

Moderator: Michael Ward, Assistant Professor, UCSF: Neurology

10:15-10:30  Break
Onderdonk Lobby, Valley Life Sciences Building

10:30-11:45  Session 7A
How Cells Talk to Each Other in Cancer and Stress
2040 Valley Life Sciences Building

Christina H. Shih, Molecular & Cell Biology and Public Health
SURF L&S Pergo Fellow
Organismal Effects of Oncogenic Stress in Drosophila
Faculty Mentor: Iswar Hariharan, Molecular & Cell Biology

Me Ree Chung, Integrative Biology and Public Health
SURF Rose Hills Independent Junior Fellow
Characterizing MASC Survival During Persistent Malaria Infection
Faculty Mentor: Charlie Kim, UCSF: Experimental Medicine

Christina Lin, Chemical Biology
SURF Rose Hills Independent Junior Fellow
Induction and Confirmation of an EMT Spectrum in SKOV-3 Cells with TGFβ-1 and Thrombin
Faculty Mentor: Lydia Sohn, Mechanical Engineering
Lisa Du, Molecular & Cell Biology
SURF Rose Hills Independent Junior Fellow
LKB1 Influences mTOR Inhibitor Sensitivity in Liver Cancer
Faculty Mentor: Kevan Shokat, Chemistry

Moderator: Sa Kan Yoo, Postdoctoral Fellow, Iswar Hariharan Lab

10:30-11:45 Session 7B
What's New with Aging, Novel Superoxide Probes, and Quieting Protein Expression
2060 Valley Life Sciences Building

Xiao Hua Chen, Molecular & Cell Biology; Nutritional Science minor
SURF Rose Hills Independent Junior Fellow
Evaluating Chromatin’s Role in Sex-Specific Aging with Drosophila Lifespan Assays
Faculty Mentor: Doris Bachtrog, Integrative Biology

Jung-Eun Shin, Chemical Biology and Molecular & Cell Biology
SURF L&S Pergo Fellow
Overexpression of Protein Hfq Causes Adverse Effects to Small RNA-mRNA Duplex Formation
Faculty Mentor: Han Lim, Integrative Biology

Jae Ho Paek, Chemistry and Molecular & Cell Biology
SURF L&S Thye Fellow
Development of Targetable Superoxide Probes and Fluorescent Copper Probes for Cellular Studies
Faculty Mentor: Christopher Chang, Chemistry, Molecular & Cell Biology

Dustin Cox, Integrative Biology
SURF Rose Hills Independent Senior Fellow
Investigation of the ttr Genes in C. elegans and their Role in Regulating Development and Lifespan, Potentially through Hormonal Signaling
Faculty Mentor: Michael Shapira, Integrative Biology

Moderator: Michael Shapira, Assistant Professor, Integrative Biology

11:45-12:45 Lunch
Valley Life Sciences Building Courtyard

12:45-2:00 Session 8A
Art, the Prose Poem, and Internet Speak
2040 Valley Life Sciences Building
Olivia Dill, History of Art and Physics
SURF L&S Anselm Fellow
Following Changes: A Study of Botanical Illustrations Modeled after Jacques Le Moyne de Morgue
Faculty Mentor: Todd Olson, History of Art

Yaul Perez-Stable Husni, Comparative Literature; Creative Writing minor
SURF L&S Anselm Fellow
History of the Prose Poem
Faculty Mentor: Charles Altieri, English

Anneliise Rehn, Linguistics; Education minor
SURF L&S JSB Fellow
Because Meaning: Language Change through Iconicity in Internet Speak
Faculty Mentor: Line Mikkelsen, Linguistics

Moderator: Charles Altieri, Professor, English
Discussant: Todd Olson, Professor, History of Art

12:45-2:00  Session 8B
Dark Matter and Toric Degenerations
2060 Valley Life Sciences Building

Nicholas Zobrist, Physics and Applied Mathematics
SURF L&S Pergo Fellow
Disk Resonator Format for Kinetic Inductance Detectors
Faculty Mentor: Bernard Sadoulet, Physics

Erik H. Kramer, Physics and Mechanical Engineering
SURF Rose Hills Independent Junior Fellow
Cold Hardware Design and Verification for the SuperCDMS SNOLAB Experiment
Faculty Mentor: Bernard Sadoulet, Physics

Priya Kshirsagar, Mathematics and Physics
SURF L&S Pergo Fellow
Toric degenerations
Faculty Mentor: Constantin Teleman, Mathematics

Akash Dixit, Physics; Electrical Engineering & Computer Sciences minor
SURF Rose Hills Independent Senior Fellow
Charge Transport in mK Ge & Si Detectors for the Cryogenic Dark Matter Search
Faculty Mentor: Bernard Sadoulet, Physics

Moderators: Constantin Teleman, Professor, Mathematics
            Todd Doughty, PhD Candidate, Physics
2:00-2:15 Break
Onderdonk Lobby, Valley Life Sciences Building

2:15-3:30 Session 9A
From Nature: Bacterial Photosynthesis, Reconstructing Old Landscapes, Saving the Wines, and Gecko-inspired Bandages
2040 Valley Life Sciences Building

Zizhou Zhao, Chemical Engineering
SURF Rose Hills Independent Junior Fellow
Gecko-inspired Bandage
Faculty Mentor: Roya Maboudian, Chemical Engineering

Megan Fu, Integrative Biology
SURF Rose Hills Independent Junior Fellow
Host Water Stress Effects on Mealybug Vector Preference and Survivorship
Faculty Mentor: Rodrigo Almeida, Environmental Science, Policy, & Management

GeorgeAnn M. DeAntoni, Anthropology and Native American Studies
SURF L&S JSB Fellow
Charcoal Identification as Means of Central California Landscape Reconstruction
Faculty Mentor: Kent Lightfoot, Anthropology

Ron Cook, Molecular & Cell Biology
SURF L&S Pergo Fellow
Photosystem II Assembly in Cyanobacteria
Faculty Mentor: Krishna Niyogi, Plant & Microbial Biology

Moderators: Kent Lightfoot, Professor, Anthropology (Archaeology)
Kai Blaisdell, Postdoctoral Fellow, Rodrigo Almeida Lab

2:15-3:30 Session 9B
You Can Tell a Lot by What Genes You Wear
2060 Valley Life Sciences Building

Kari Miller, Molecular & Cell Biology
SURF L&S Pergo Fellow
Genetic Analysis of Evolved Stickleback Gill Raker Reduction
Faculty Mentor: Craig Miller, Molecular & Cell Biology

Katrina Olson, Molecular & Cell Biology
SURF Rose Hills Independent Senior Fellow
How is Gene Expression Controlled During Development? Identifying Minimal Promoters in Ciona Intestinalis
Faculty Mentor: Michael Levine, Molecular & Cell Biology
Annie Yau, Molecular & Cell Biology; Global Poverty & Practice minor
SURF Rose Hills Experience Sophomore Fellow
Mapping and Phenotypic Analysis of *Caenorhabditis elegans* sax-9, a Gene Involved in Axon Guidance and Cell Migration
Faculty Mentor: Gian Garriga, Molecular & Cell Biology

Alex Onishi, Molecular & Cell Biology
SURF L&S Pergo Fellow
Identifying a Novel Genetic Modifier for Cataracts in Mouse Genetic Models
Faculty Mentor: Xiaohua Gong, Optometry

Moderator: Gian Garriga, Professor, Molecular & Cell Biology

3:30-3:45 Break
Onderdonk Lobby, Valley Life Sciences Building

3:45-5:15 Session 10
Closing Plenary Session
2060 Valley Life Sciences Building

Robert Potter, Molecular & Cell Biology
SURF Rose Hills Independent Junior Fellow
Macrophage Kinase Signaling during Mycobacterium Tuberculosis Infection
Faculty Mentor: Sarah Stanley, Public Health

Carolyn Zola, History
SURF L&S Wishek Fellow
Redefining Worker Identity in the 1920s
Faculty Mentor: David Henkin, History

Sean Sun, Integrative Biology; Global Poverty & Practice minor
SURF L&S Pergo Fellow
AAV9 for Treatment of Inborn Error of Cholesterol Synthesis
Faculty Mentor: Gordon Watson, Molecular & Cell Biology

Edward Mogck, History; Public Policy minor
SURF L&S JSB Fellow
Nowhere to Go: Agnews State Hospital and the Politics of Deinstitutionalization
Faculty Mentor: Thomas Laqueur, History

Closing Remarks: Thomas Laqueur, Professor, History
Moderators: Thomas Laqueur, Professor, History
Gordon Watson, Investigator, Children’s Hospital of Oakland Research Institute