18th Annual UC Irvine MSTP Retreat

UNIVERSITY OF CALIFORNIA IRVINE
MEDICAL SCIENTIST TRAINING PROGRAM
Annual Retreat
UCLA Lake Arrowhead Resort conference Center
Lake Arrowhead, CA

OCTOBER 4TH THRU 6TH, 2013
Table of Contents

Schedule of Events........................................................................................................................................4
Speaker Biographies......................................................................................................................................10
Workshop Biographies.................................................................................................................................12
Student Presentations....................................................................................................................................13
Faculty..........................................................................................................................................................18
Student Profiles...........................................................................................................................................21
# Schedule of Events

18th Annual MSTP Student/Faculty Retreat

**Friday, Oct. 4th**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:00 - 6:30</td>
<td>Check-in, <em>Lakeview</em></td>
</tr>
<tr>
<td>6:30-8:00</td>
<td>Dinner</td>
</tr>
</tbody>
</table>
| 8:00-9:00  | Keynote, *Pineview*  
Francis Duhay, MD, MBA |
| 9:00-12:00 | Social, *Tavern*  
Introduction of MS1s |

**Saturday, Oct. 5th**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-9:00</td>
<td>Breakfast</td>
</tr>
</tbody>
</table>
| 9:00-10:40 | Student Presentations  
*Pineview* |
<p>| 9:00-9:15  | Mona Wood                                                             |
| 9:20-9:35  | Suzi Klaus                                                            |
| 9:40-9:55  | Sharine Wittkopp                                                        |</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00-10:15</td>
<td>Tony Chuang</td>
</tr>
<tr>
<td>10:20-10:35</td>
<td>Jen Wu</td>
</tr>
<tr>
<td>10:40-10:50</td>
<td>Group photo</td>
</tr>
<tr>
<td></td>
<td>*Outside Lawn</td>
</tr>
<tr>
<td>11:00-12:15</td>
<td>Poster Session</td>
</tr>
<tr>
<td></td>
<td>*Lakeview</td>
</tr>
<tr>
<td>12:15-1:15</td>
<td>Lunch</td>
</tr>
<tr>
<td>1:15-3:00</td>
<td>Workshops*</td>
</tr>
<tr>
<td></td>
<td>Scientific Entrepreneurship</td>
</tr>
<tr>
<td></td>
<td>Patent Law &amp; Research</td>
</tr>
<tr>
<td>3:00-6:30</td>
<td>Recreational time</td>
</tr>
<tr>
<td></td>
<td>MSTP Family Competition</td>
</tr>
<tr>
<td></td>
<td>Basketball &amp; Tennis</td>
</tr>
<tr>
<td></td>
<td>Lawn Games (front lawn)</td>
</tr>
<tr>
<td></td>
<td>Yoga at sunset with Priel</td>
</tr>
<tr>
<td>6:30-8:00</td>
<td>Dinner</td>
</tr>
<tr>
<td>8:00-9:00</td>
<td>Keynote, <em>Pineview</em></td>
</tr>
<tr>
<td></td>
<td>Ellen Feigal, MD</td>
</tr>
<tr>
<td>9:00-12:00</td>
<td>Social, <em>Tavern</em></td>
</tr>
</tbody>
</table>
### Sunday, Oct. 6th

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-9:00</td>
<td>Breakfast</td>
</tr>
<tr>
<td>9:00-10:00</td>
<td>Alumni Panel, <em>Pineview</em></td>
</tr>
<tr>
<td>10:00-11:00</td>
<td>Student Meeting <em>Lakeview</em></td>
</tr>
<tr>
<td>11:00-12:00</td>
<td>Checkout</td>
</tr>
<tr>
<td>12:00-1:00</td>
<td>Lunch</td>
</tr>
</tbody>
</table>

*: During events marked by an asterisk, arts & crafts as well as other fun activities will be available for children of retreat attendees in the *Skyview* room. These events will be graciously hosted by Kendall Abud.
Dr. Ellen G. Feigal is the current Vice President, Research and Development at the California Institute for Regenerative Medicine (CIRM). Dr. Feigal’s research career began at UC Irvine, where she earned her bachelor’s degree in biology and a Master’s degree in molecular biology and biochemistry. She went on to earn her MD from UC Davis and then completed her residency in internal medicine at Stanford followed by her fellowship in hematology/oncology at UC San Francisco.

Dr. Feigal was on the faculty at UC San Francisco before moving south to San Diego, CA where she was on the faculty of UC San Diego prior to joining National Cancer Institute as Director of the Division of Cancer Treatment and Diagnosis from 2001-2004. Starting in 2004, Dr. Feigal was the Vice President and Deputy Scientific Director at the Translational Genomics Research Institute and Director of Medical Devices and Imaging at the Critical Path Institute. In 2007, Dr. Feigal became the Chief Medical Officer as Insys Therapeutics where she stayed until 2008, when she joined Amgen as the Executive Medical Director, Global Development. At Amgen, Dr. Feigal focused on the clinical development of therapeutics in hematology and oncology. She also led the scientific/clinical interface with patient advocacy organizations, formalized the company’s policy on expanded access to therapies for those with limited or no treatment options, and led the cross-functional teams to the company’s first collaborative research and development agreement with the National Cancer Institute.

While working for Insys and Amgen, Dr. Feigal was also adjunct professor and founding Director of the American Course on Drug Development and Regulatory Sciences at UC San Francisco’s School of Pharmacy. The course was developed under her leadership as a collaborative effort with the FDA, UCSF’s Department of Bioengineering and Therapeutic Sciences, UCSF’s Center for Drug Development Sciences, and the European Center of Pharmaceutical Medicine at the University of Basel. The course is taught in both Washington, D.C and San Francisco.
Workshop Biographies

Peter Lee, JD

Professor Peter Lee is a Professor of Law and Chancellor’s Fellow at the University of California, Davis, School of Law. Professor Lee graduated from Yale Law School, where he was a member of The Yale Law Journal and a student director of the international human rights clinic. He joined the King Hall faculty after clerking for Judge Barry G. Silverman of the Ninth Circuit Court of Appeals. He received his undergraduate degree from Harvard University, where he studied the history and philosophy of science. Professor Lee studies the intersection of science and society in his legal research, which explores the patent system’s impact on scientific and technological progress.

Kelvin W. Gee, PhD

Dr. Kelvin W. Gee is a Professor of Pharmacology at the University of California, Irvine. He is a neuropharmacologist whose principal interests are the mechanisms that regulate signaling through ligand-gated ion channels and the identification of novel therapeutic strategies for the treatment of disorders amenable to modulation of signal transduction pathways. Dr. Gee received his undergraduate degree from the University of California, Irvine, and continued his studies at the University of California, Davis, where he attained his PhD in Pharmacology & Toxicology. Dr. Gee holds numerous patents based on his work, and has many years of experience in scientific entrepreneurship.
Student Presentations

Mona Wood

*A translational research project, structure-based design of proton channel inhibitors.*

It is estimated that in 2001, 1.5 million people were diagnosed with some form of cancer and over 500,000 died of the disease. To improve clinical outcomes, new targets for cancer therapeutics are desirable. Towards this end, research studies in the past few decades have uncovered ion channel proteins as new targets for cancer therapy.

The Hv1 proton channel is one of the latest ion channels to emerge as a potential target for cancer diagnostics and treatment. The channel is preferentially expressed in highly metastatic human breast cancer cell lines and tumors, and appears to be essential for the cancer cell’s ability to invade and metastasize. The channel likely contributes to cancer progression by helping to maintain the dysregulated pH gradient (higher intracellular pH, lower extracellular pH) characteristic of most cancers. The increase H⁺ secretion from Hv1 overexpression may aid cell survival by inhibiting acid-induced apoptosis. Furthermore, the subsequent acidification of the extracellular space stimulates acid-activated proteases to degrade the extracellular matrix, facilitating tumor cell invasion and dissemination. Functional blockade of Hv1 conductance *in vivo* and *in vitro* has been shown to significantly inhibit cancer progression and metastasis, highlighting channel blockade as a promising new avenue for cancer therapeutics.

In previous studies, the functional blockade of Hv1 *in vivo* and *in vitro* was achieved using RNA-interference technology. We propose, for the first time, to study small molecule blockers of Hv1 as antineoplastic therapeutics. To rationally design small molecules with high affinity for the channel, we develop a structural model of Hv1. Detailed atomistic structure/function data from molecular dynamics simulations of the model will address questions about how Hv1 is able to sense voltage and conduct protons, which will help to establish basic principles of ion conduction through voltage-sensing domains. Answers to these questions will guide the design of high affinity Hv1 blockers, which will be evaluated for their therapeutic potential to inhibit cancer progression using cell proliferation and migration assays. We hypothesize that these computational studies and *in vitro* assays will support Hv1 blockade as a viable mechanism for breast cancer cell inhibition and allow for the development of novel antineoplastic pharmaceuticals.
Suzi Klaus
Characterization of Neutrophils in *Salmonella* Infection

*Introduction* | The presence of functional immune cells in the intestinal mucosa determines whether a pathogen like *Salmonella* causes inflammatory diarrhea or potentially fatal bacteremia. Clinical and experimental evidence strongly suggests the characteristic influx of neutrophils into the intestinal mucosa during *Salmonella* infection is important in preventing its dissemination. Recruitment of neutrophils to the site of infection is orchestrated by cytokines released from intestinal T,17 T cells, which induce intestinal epithelial cells to express antimicrobial proteins and neutrophil chemoattractants (CXCL1, CXCL2). Neutrophils detect the CXC chemokine gradient with the receptor CXCR2, which is present on all circulating neutrophils in non-inflammatory conditions. Although many studies indicate that neutrophils are an important part of host defense during infection with *S. typhimurium*, to date, there are no detailed studies about the characteristics of neutrophils that are recruited to the intestine to control *S. typhimurium* infection.

*Methods* | Mice were depleted of neutrophils with antibody targeting either a neutrophil chemokine receptor (CXCR2) or granulocyte receptor (Gr-1) and infected with *Salmonella typhimurium*. Intestinal burden and dissemination of *Salmonella* were quantitated. Cecal tissue was analyzed for antimicrobial protein levels and histopathological inflammation score. Neutrophils were isolated from intestinal tissues and analyzed by flow cytometry.

*Results* | Consistent with a protective role of neutrophils during infection, increased dissemination of *Salmonella* to the mesenteric lymph nodes and spleen was observed in neutrophil depleted animals. Neutrophil antimicrobial protein levels in cecal tissue were decreased in anti-CXCR2 treated animals, but anti-Gr-1 treated animals showed similar levels of cecal antimicrobial proteins as mock-depleted, infected animals. Remarkably, histopathological analysis showed the opposite trend regarding the presence of neutrophils in the cecum: no difference between anti-CXCR2-treated mice versus mock-treated, infected mice, but fewer neutrophils in the ceca of anti-Gr-1 treated animals. Flow cytometric analysis confirmed the relative number of infiltrating neutrophils, while showing different protein expression patterns in intestinal neutrophils than bone marrow or blood neutrophils.

*Conclusions* | These results suggest there may be distinct, previously unrecognized populations of neutrophils in the gut mucosa during *Salmonella* infection. Future studies will use FACS sorting, RNA analysis, and knock-out animals to identify neutrophil characteristics essential for control of *Salmonella* infection.
Sharine Wittkopp

Oxidative stress and air pollution: how gene-environment interactions can be the key to understanding susceptibility and mechanisms of toxicity.

Exposure to air pollution is associated with adverse cardiovascular outcomes, many of which have causal contributions from oxidative stress. As such, factors related to the management of oxidative species may be important in the response to air pollution exposure. One such factor is inherited genetic variation in enzymes along antioxidant pathways. We have genotyped our cohort for a functional polymorphism in antioxidant enzyme mitochondrial superoxide dismutase (SOD2). This variant has been shown to affect SOD2 mitochondrial import and activity. We examine the effect of this polymorphism on air pollution exposure-outcome relationships in our cohort of elderly human subjects with coronary artery disease living in Los Angeles. Oxidative stress represents one proposed mode of toxicity of air pollution; thus, characterizing the role of variation in this important antioxidant enzyme expands our understanding of this pathway in air pollution exposure-associated adverse cardiovascular outcomes.
Tony Chuang

*Lhx2 and p57 in maintenance of radial cortical glia*

Lhx2, a LIM homeobox gene, is necessary in the establishment of radial glial cell identity in neuroepithelial cells during the preneurogenic period. Lhx2 is further shown here to have a role in the maintenance of the radial glial cell population during the neurogenic period of cortical development. Specifically, Lhx2 suppresses premature differentiation of the radial glial cell population into neuron-committed intermediate progenitor cells, terminally differentiated neurons, and astroglia. Inactivation of Lhx2 leads to accelerated radial glial cell differentiation with fewer rounds of self-renewal in the progenitor expansion phase, thus resulting in depletion of the radial glia and ultimately greatly decreased generation of all three types of the aforementioned radial glial cell progeny. Microrray studies suggest that Lhx2 may regulate and maintain radial glial cells through suppression of p57, a cyclin-dependent kinase inhibitor, an imprinted gene that suppresses cell cycle reentry.
Introduction | Refinement of biomarkers and predictors of treatment response could greatly benefit restorative stroke therapeutics. The current study examined the performance of established biomarker/predictor measures in patients undergoing 4 weeks of therapy, and compared them to performance of dense-array electroencephalography (dEEG) measures of cortical connectivity.

Methods | Twelve adults (mean age=54.0±16.6 years) with chronic stroke and mild to moderate hemiparesis (Fugl-Meyer (FM) score=39±12, range 23-56, max 66) underwent a baseline three minute resting dEEG recording (256 channels) as well as a 3T structural MRI scan, and then received 4 weeks of telerehabilitation therapy. For dEEG measurement of cortical connectivity, mean coherence was derived for the high beta (20-30 Hz) frequency band, and then partial least squares (PLS) regression was used to relate resting-state mean beta coherence to: (1) baseline impairment (FM score), and (2) improvement (change in FM across 4 week of therapy). Infarct volume and percent corticospinal tract (CST) injury, measured on MRI scans, were also calculated.

Results | Arm motor status improved across the 4 weeks of therapy (FM change=4.5±2.6, p=0.0001). Regarding biomarkers of baseline impairment, CST injury was correlated with baseline FM ($R^2=0.52$, $p=0.008$), but infarct volume and age did not ($p>0.05$). Resting-state dEEG beta coherence correlated with baseline FM ($R^2=0.95$); adding infarct volume and CST injury did not improve correlation strength of the dEEG measure. Regarding predictors of improvement, infarct volume, CST injury, age and baseline FM each did not predict change in FM across 4 weeks of therapy ($p>0.05$). Resting-state beta coherence did predict change in FM score ($R^2=0.74$) in a leave-one-out and predict validation procedure; adding infarct volume, CST injury, and baseline FM did not improve predictive strength of the dEEG measure.

Conclusion | A dEEG measure of cortical connectivity was a strong correlate of baseline status and an excellent predictor of behavioral improvement across 4 weeks of therapy. These dEEG measures compared favorably with established behavioral, demographic, and radiologic measures. Resting-state dEEG is a rapid, safe method for studying brain function that performs excellent as a biomarker and as a predictor.
FACULTY

Alan Goldin, MD, PhD
Professor
MSTP Director
Senior Associate Dean, Academic Affairs
Microbiology & Molecular Genetics
Physiology & Biophysics
Anatomy & Neurobiology

Edwin Monuki, MD, PhD
Associate Professor
MSTP Associate Director
Acting Chair, Pathology & Laboratory Medicine
Developmental & Cell Biology

Robert Edwards, MD, PhD
Assistant Professor
MSTP Advisor
Pathology & Laboratory Medicine
Steve George, MD, PhD
Professor
MSTP Advisor
Director, Edwards Lifesciences Center for
Advanced Cardiovascular Technology
Biomedical Engineering
Chemical Engineering & Materials Science

Tallie Z. Baram, MD, PhD
Professor
MSTP Advisor
Pediatrics
Anatomy & Neurobiology

Sabee Molloi, PhD
Professor
MSTP Advisor
Radiological Sciences
Biomedical Engineering
Electrical Engineering & Computer Science
Ming Tan, MD
Professor
MSTP Advisor
Microbiology & Molecular Genetics
Medicine, Infectious Disease
STUDENT PROFILES

Edsel Abud
Hometown: Downey, California
Undergraduate: CSU, Long Beach
Entry Year: 2011
Current Year: 1st Year Graduate School
Department: Neurobiology & Behavior
Lab: Mathew Blurton-Jones

Michelle Allen-Sharpley
Hometown: San Jose, California
Undergraduate: San Jose State University
Entry Year: 2006
Current Year: 3rd Year Medical School
Department: Neurobiology & Behavior
Lab: Karina Cramer

Megan Ansbro
Hometown: Conneaut, Ohio
Undergraduate: Denison University
Entry Year: 2013
Current Year: 1st Year Medical School
Anh Bui
Hometown: Morgan Hill, California
Undergraduate: Stanford University
Entry Year: 2010
Current Year: 2nd Year Graduate School
Department: Anatomy & Neurobiology
Lab: Ivan Soltesz

Caren Armstrong
Hometown: Denver, Colorado
Undergraduate: Cornell University
Entry Year: 2005
Current Year: 3rd Year Medical School
Department: Anatomy & Neurobiology
Lab: Ivan Soltesz

Kathleen Carlos
Hometown: Visalia, California
Undergraduate: CSU Los Angeles
Entry Year: 2013
Current Year: 1st Year Medical School
Janice Chang

Hometown: Irvine, California
Undergraduate: UC Berkeley
Entry Year: 2006
Current Year: 4th Year Medical School
Department: Anatomy & Neurobiology
Lab: Fan-Gang Zeng

Tony Chuang

Hometown: Rancho Cucamonga, California
Undergraduate: Pomona College
Entry Year: 2009
Current Year: 3rd Year Graduate School
Department: Pathology
Lab: Edwin Monuki

Sarah Cousins

Hometown: Richmond, Virginia
Undergraduate: Virginia Polytechnic Institute
Entry Year: 2010
Current Year: 2nd Year Graduate School
Department: Social Ecology
Lab: Susan Huang
Megan Curran
Hometown: San Jose, California
Undergraduate: UC San Diego
Entry Year: 2012
Current Year: 2nd Year Medical School

Rupak Datta
Hometown: Randolph, New Jersey
Undergraduate: Tufts University
Entry Year: 2008
Current Year: 4th Year Medical School
Department: Social Ecology
Lab: Susan Huang

Andrew Dolinko
Hometown: Moraga, California
Undergraduate: Johns Hopkins University
Entry Year: 2011
Current Year: 1st Year Graduate School
Department: INP
Lab: Dritan Agalliu
Tobias Dong
Hometown: San Diego, California
Undergraduate: UC San Diego
Entry Year: 2010
Current Year: 2nd Year Graduate School
Department: Physiology & Biophysics
Lab: Michael Cahalan

Marcella Evans
Hometown: Corte Madera, California
Undergraduate: UC San Diego
Entry Year: 2008
Current Year: 4th Year Graduate School
Department: Epidemiology
Lab: Maria Corrada

Avital Fischer
Hometown: Yuvalim, Israel
Undergraduate: Massachusetts Institute of Technology
Entry Year: 2012
Current Year: 2nd Year Medical School
Alvaro Galvis

Hometown: Pacifica, California
Undergraduate: Santa Clara University
Entry Year: 2006
Current Year: 4th Year Medical School
Department: Molecular Biology & Biochemistry
Lab: Hung Fan

Goutham Ganesan

Hometown: Austin, Texas
Undergraduate: University of Maryland
Entry Year: 2008
Current Year: 3rd Year Graduate School
Department: Pharmacology
Lab: Pietro Galssetti

Michael Ghijsen

Hometown: San Jose, California
Undergraduate: UC Irvine
Entry Year: 2011
Current Year: 1st Year Graduate School
Department: Biomedical Engineering
Lab: Bruce Tromberg
Erin Gutilla
Hometown: Fresno, California
Undergraduate: Mills College
Entry Year: 2011
Current Year: 1st Year Graduate School
Department: Anatomy & Neurobiology
Lab: Oswald Steward

Nabila Haque
Hometown: Chittagong, Bangladesh
Undergraduate: Duke University
Entry Year: 2012
Current Year: 2nd Year Medical School

Evelyn Hoover
Hometown: Moraga, California
Undergraduate: Texas A&M
Entry Year: 2013
Current Year: 1st Year Medical School
Logan Hubbard

Hometown: Columbus, Ohio
Undergraduate: Case Western
Entry Year: 2012
Current Year: 2nd Year Medical School

Sung G Ji

Hometown: Tokyo, Japan
Undergraduate: Johns Hopkins University
Entry Year: 2011
Current Year: 1st Year Graduate School
Department: Anatomy & Neurobiology
Lab: John H Weiss

Suzi Klaus

Hometown: Iowa City, Iowa
Undergraduate: University of Iowa
Entry Year: 2009
Current Year: 3rd Year Graduate School
Department: Microbiology & Molecular Genetics
Lab: Manuela Raffatellu
Zander Lin
Hometown: Lincoln, Nebraska
Undergraduate: University of Nebraska, Lincoln
Entry Year: 2007
Current Year: 3rd Year Medical School
Department: Biomedical Engineering
Lab: Bruce Tromberg

Virginia Liu
Hometown: Cupertino, California
Undergraduate: UC Los Angeles
Entry Year: 2008
Current Year: 3rd Year Medical School
Department: Anatomy & Neurobiology
Lab: Steven Cramer

Colin McCrimmon
Hometown: Charlottesville, Virginia
Undergraduate: University of Virginia
Entry Year: 2010
Current Year: 2nd Year Graduate School
Department: Biomedical Engineering
Lab: Zoran Nenadic
Timothy Minh

Hometown: Orange, California
Undergraduate: UC Berkely
Entry Year: 2006
Current Year: 4th Year Medical School
Department: Pharmacology
Lab: Pietro Galassetti

Haik Mkhikian

Hometown: North Hollywood, California
Undergraduate: UC Irvine
Entry Year: 2006
Current Year: 6th Year Graduate School
Department: Microbiology & Molecular Genetics
Lab: Michael Demetriou

Nitish Nag

Hometown: Fremont, California
Undergraduate: UC Berkeley
Entry Year: 2013
Current Year: 1st Year Medical School
Hinesh Patel
Hometown: Irvine, California
Undergraduate: UC Berkeley
Entry Year: 2013
Current Year: 1st Year Medical School

Ryan Quigley
Hometown: Clovis, California
Undergraduate: UC Berkeley
Entry Year: 2007
Current Year: 3rd Year Medical School
Department: Biomedical Engineering
Lab: Thay Lee

Courtney Reynolds
Hometown: Martinez, California
Undergraduate: UC Santa Barbara
Entry Year: 2006
Current Year: 4th Year Medical School
Department: Social Ecology
Lab: Susan Huang
Priel Schmalbach

Hometown: Miami, Florida
Undergraduate: University of Florida
Entry Year: 2008
Current Year: 4th Year Graduate School
Department: Social Ecology
Lab: Margaret Schneider

Ronald Seese

Hometown: Thousand Oaks, California
Undergraduate: UC Los Angeles
Entry Year: 2007
Current Year: 3rd Year Medical School
Department: Anatomy & Neurobiology
Lab: Christine Gall

Bassem Shoucri

Hometown: Manhattan Beach, California
Undergraduate: UC San Diego
Entry Year: 2011
Current Year: 1st Year Graduate School
Department: Developmental & Cell Biology
Lab: Bruce Blumberg
Sarah Smith

Hometown: Galway, New York
Undergraduate: Johns Hopkins University
Entry Year: 2013
Current Year: 1st Year Medical School

Brad Wallentine

Hometown: Dallas, Texas
Undergraduate: University of Texas at Austin
Entry Year: 2010
Current Year: 3rd Year Graduate School
Department: Molecular Biology & Biochemistry
Lab: Hartmut ‘Hudel’ Luecke

Michelle Wedemeyer

Hometown: Palos Verdes, California
Undergraduate: UC San Diego
Entry Year: 2005
Current Year: 4th Year Medical School
Department: Anatomy & Neurobiology
Lab: Hans Keirstead
Don Wei

Hometown: Sacramento, California
Undergraduate: University of Illinois Urbana – Champaigne
Entry Year: 2010
Current Year: 2nd Year Graduate School
Department: Anatomy & Neurobiology
Lab: Daniele Piomelli

Bill Winter

Hometown: Baton Rouge, Louisiana
Undergraduate: Tulane University
Entry Year: 2007
Current Year: 3rd Year Medical School
Department: Biomedical Engineering
Lab: Ramesh Srinivasan

Sharine Wittkopp

Hometown: Medford, New Jersey
Undergraduate: Bryn Mawr College
Entry Year: 2007
Current Year: 5th Year Graduate School
Department: Environmental Toxicology
Lab: Ralph Delfino
Mona Wood

Hometown: Ann Arbor, Michigan
Undergraduate: University of Michigan
Entry Year: 2008
Current Year: 4th Year Graduate School
Department: Chemistry
Lab: Doug Tobias

Jennifer Wu

Hometown: Albany, Oregon
Undergraduate: Washington University
Entry Year: 2009
Current Year: 3rd Year Graduate School
Department: Anatomy & Neurobiology
Lab: Steven Cramer

Ziwei Zhong

Hometown: Carmel, Indiana
Undergraduate: Purdue University
Entry Year: 2012
Current Year: 2nd Year Medical School