Commencement 2009
MOLECULAR & CELL BIOLOGY
FRIDAY, MAY 22, 2009

FACULTY & GRADUATES PROCESSIONAL
(Audience is requested to stand)

OPENING REMARKS AND WELCOME

G. STEVEN MARTIN, PH.D.
Co-Chair, Department of Molecular and Cell Biology
Professor of Cell and Developmental Biology
Affiliate of Biochemistry and Molecular Biology

COMMENCEMENT ADDRESS

ROBERT TJIAN, PH.D.
Will Molecular Biology Training Cut it in the Real World?

President, Howard Hughes Medical Institute
Professor of Biochemistry and Molecular Biology
University of California, Berkeley

GRADUATE STUDENT ADDRESS

LEONID TEYTELMAN
6 Years in 6 Minutes: a Recap of the Graduate Experience

PRESENTATION OF:
Alan Bearden Award
Nicholas Cozzarelli Prize

HOODING OF THE PH.D. & M.A. CANDIDATES

FACULTY & GRADUATES RECESSIONAL
(Audience is requested to remain seated)

Please join us after the ceremony at Alumni House
for a champagne reception
(across from Zellerbach Playhouse)
DEPARTMENT OF MOLECULAR AND CELL BIOLOGY  
Doctor of Philosophy Degree

Jason N. Aoto  
_Lu Chen_  
The Molecular Mechanisms Underlying Activity-Dependent Homeostatic Plasticity

Katherine Stewart Brown  
_Sharon Amacher_  
The Function of Signaling Gradients in Zebrafish Somitogenesis

Raymond Eric Chen  
_Jeremy Thorner_  
Function and Regulation of Mitogen-Activated Protein Kinases in the Yeast _Saccharomyces cerevisiae_

Shannon DeMaria  
_John Ngai_  
The Role of Family C Odorant Receptors in Zebrafish Olfaction

Zain Yusuf Dossani  
_Karsten Weis_  
mRNP Remodeling at the Nuclear Pore Complex: Studies in _Saccharomyces cerevisiae_

Elizabeth Megan Flynn  
_Thomas Alber_  
Structural and Functional Characterization of _Mycobacterium tuberculosis_ Virulence Factor PtpB

Benjamin Freedman  
_Rebecca Heald_  
Linker Histone Structure, Function, and Regulation in _Xenopus_

Sarah A. Gilmore  
_Carolyn Bertozzi_  
The Roles of Sulfated Metabolites in the Pathogenesis of _Mycobacterium tuberculosis_

Jodi Gureasko  
_John Kuriyan_  
Role of the Membrane Surface in the Activation of the Ras-Specific Nucleotide Exchange Factor Son of Sevenless

Giao Bich Hang  
_Yang Dan_  
Interactions of Synaptic Inputs From Multiple Cortical Pathways in the Visual Cortex

Shirley Hsiao-Lin Huang  
_Michael Marletta_  
Biochemical Characterization of Oxygen Regulated Soluble Guanylate Cyclases: Ligand Binding and Enzymatic Activity

Kathleen D. Kolstad  
_John Flannery_  
Development and Assessment of Gene Therapies for Inherited Blinding Diseases

Crystal Nicole Marconett  
_Gary Firestone_  
Indole Control of Estrogen Receptor Signaling in Human Breast Cancer
Nicole Perrault Meyer-Morse  
*Daniel Portnoy*  
Suppression of Cell-Mediated Immunity by Avirulent *Listeria monocytogenes*

Bosun Min  
*Kathleen Collins*  
Identification and Characterization of Telomerase Holoenzyme Proteins and Anchor Site Subunit in *Tetrahymena thermophila*

Melissa Lynn Mott  
*James Berger*  
Mechanistic Studies of Bacterial DNA Replication Initiation

Sarah Elizabeth Munchel  
*Karsten Weis*  
The Regulation of mRNA Turnover *in vivo*

Christine Inyoung Nam  
*Lu Chen*  
Extracellular Interaction Defines AMPA Receptor Trafficking Checkpoint Regulated by Stargazin

Stephanie L. Osborn  
*Astar Winoto*  
The Non-Apoptotic Roles of the Fas-Associated Death Domain (FADD) Protein in the Immune Response

Lisa M. Prach  
*Thomas Alber*  
Biosynthesis, Structure and Function of Diterpenes in *Mycobacterium tuberculosis*

Stacia Rodenbusch  
*Abby Dernburg*  
The Regulation of Synaptonemal Complex Assembly During Meiosis in *C. elegans*

Thomas L. Russell  
*Frank Werblin*  
Neuronal Circuitry of the Local Edge Detector Retinal Ganglion Cell

Alejandro Sabogal  
*Donald Rio*  
Structural and Biochemical Studies of the P-element Transposase

Allyn Schoeffler  
*James Berger*  
Structure-Function Relationships in Bacterial Type IIA topoisomerases

Ryan K. Shultzaberger  
*Michael Eisen & Jack Kirsch*  
Functional Variability in Transcriptional Initiation Complexes

Mansi Srivastava  
*Daniel Rokhsar*  
Early Animal Evolution: Insights from the Genomes and Embryos of Cnidarians, Placozoans, and Sponges

Brian Martin Sullivan  
*Laurent Coscoy*  
Immune Modulation by Human Roseoloviruses
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<td>Daniel Portnoy</td>
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GRADUATE GROUP IN BIOPHYSICS
Doctor of Philosophy Degree

Joseph D. Batchelor
David Wemmer
Structure and Regulatory Mechanism of $\zeta^{54}$ Activator Proteins

Robert Kurata Bradley
Ian Holmes
Annotation, Alignment and Reconstruction of Non-Coding RNAs

Arnab Bula Chowdry
Tracy Handel
Protein Design: From \textit{in silico} to \textit{in vivo}

Derek Lorin Greenfield
Jan Liphardt
Prokaryotes, Proteorhodopsin, and PALM, Oh My!

Melinda S. Hanes
Tracy Handel
Structural, Biochemical, and Computational Analysis of $\beta$-lactamase/BLIP Interactions

Hamilton Courtney Hodges
Carlos Bustamante
Single-Molecule Studies of Gene Expression

Philip Johnson
Montgomery Slatkin
Unbiased Population Genetic Inference From High-Throughput Sequencing Data

Boryana Nikolaeva Manz
Jay Groves
Spatial Organization in the Immune Synapse

Kathleen Ratcliff
Susan Marqusee
Thermodynamic Characterization and Folding of a Moderately Thermophilic RNase H: Identification of Factors That Lead to Thermal Stability in Proteins

Stephanie A. Szobota
Ehud Isacoff
Optical Control of Excitatory Neurotransmitter Receptors

GRADUATE GROUP IN COMPARATIVE BIOCHEMISTRY
Doctor of Philosophy Degree

Sebastian Deindl
John Kuriyan
Regulation of Catalytic Activity of the Protein Tyrosine Kinase ZAP-70
GRADUATE GROUP IN ENDOCRINOLOGY
Master of Arts Degree

Brian Pho Bui
Paola Timiras & Gary Firestone
Effects of High Pressure Freezing on Rat Pancreatic Tissue Viability and Structural Integrity

GRADUATE GROUP IN MOLECULAR TOXICOLOGY
Doctor of Philosophy Degree

Ida Aronchik
Gary Firestone
Mechanism of Antiproliferative Signaling by Indole-3-Carbinol in Human Breast and Skin Cancer Cells

GRADUATE GROUP IN NEUROSCIENCE
Doctor of Philosophy Degree

Ryan T. Canolty
Robert Knight
Using Neuronal Oscillations to Investigate Large-Scale Brain Networks

Sundari Chetty
Daniela Kaufner
Molecular Mechanisms of the Stress Response and Adult Neurogenesis

Hui Lu
Mu-Ming Poo
Synaptic Mechanism of Cocaine Addiction

Brian Pasley
Ralph Freeman
Neurovascular Coupling in Brain Imaging and Brain stimulation

Lei Shi
Thomas Griffiths
Neural Implementation of Bayesian Inference: Hierarchical Exemplar Models and its Dynamics
The Department of Molecular and Cell Biology is grateful to the organizers and members of its Graduate Student Organization. These students have contributed their time, talents, and energy to produce important programs and activities that have greatly enhanced the educational experience of all MCB students.

**MCB-GRADUATE STUDENT ORGANIZATION**

**President**  
Richard Lusk

**Vice President**  
Veronica Anania

**Secretary**  
Angela Brooks

**Divisional Representatives**
- Padma Gunda – Biochemistry and Molecular Biology
- Bryan Schmidt – Biochemistry and Molecular Biology
- Teresa Lee – Cell and Developmental Biology
- Laura Lombardi – Genetics, Genomics and Development
- Nicholas Arpaia – Immunology and Pathogenesis
- Ryan Klimczak – Neurobiology
- Brock Roberts – First Year

**Admissions Committee**
- Elizabeth Znameroski – Biochemistry and Molecular Biology
- Evgenia (Jane) Klimenko – Biochemistry and Molecular Biology
- Meredith Carpenter – Cell and Developmental Biology

**Graduate Affairs Committee**
- James Fraser
- Albert Lang

**Graduate Assembly**
- Daniel (Avery) Little (rep)
- Kieren Patel (rep)
- Megan Flynn (rep)
- J. Tony D’Alessio (rep)
- Patty Garcia (alternate)

**Graduate Assembly**
- Richard Lusk
- Jody Westbrook

**Marian E. Koshland Lecture**
- Emily Crane
- Jessica Lyons
- Evgenia (Jane) Klimenko
- Lars Plate
- Rebecca Pferdehirt
- Galo Garcia
- Veronica Anania
- Sarah Ewald

**Careers for Life Sciences Ph.D.’s**
- Adam Freund
- Hector Huang

**ThERPs**
- Richard Lusk
- Jody Westbrook

**Data Club Organizer**
- Kathryn (Kate) Monroe