

**6th Annual UC Davis Research Retreat on Host Microbe Interaction
(HMI)
Granlibakken, October 13th-14th, 2011**

ORGANIZING COMMITTEE

Co-Chairs:

Andreas Bäumler, Ph.D., Vice Chair of Research, Medical Microbiology and Immunology

Satya Dandekar, Ph.D., Chair, Medical Microbiology and Immunology

Members:

Stephen Barthold D.V.M, Ph.D., Director, Center for Comparative Medicine

Nicole Baumgarth, D.V.M, Ph.D., Chair, Graduate Group Immunology

Charles Bevins, M.D., Ph.D., Medical Microbiology and Immunology

Gitta Coaker, Ph.D., Plant Pathology

Johan Leveau, Ph.D., Plant Pathology

Shirley Luckhart, Ph.D. Medical Microbiology and Immunology

Richard Michelmore, Ph.D., Director, Genome Center

Jay Solnick, M.D., Ph.D., Medicine, Center for Comparative Medicine

Glenn Young, Ph.D., Chair, Microbiology Graduate Group

PROGRAM 2011 UC DAVIS HMI RETREAT

October 13

12:00pm ***Opening Reception and Lunch (Granhall)*** *

1:00-3:00pm ***Scientific Session 1 (Mountain Room)*** *

*Moderator: **Charles Bevins**, Department of Medical Microbiology and Immunology, School of Medicine*

1:00 **Opening Address**

1:15-1:30 *Abhaya Dandekar*
Department of Plant Biology and Plant Sciences
College of Biological Sciences
“Engineering an innate immune response in plants”

1:35-1:50 *Jared Shaw*
Department of Chemistry
College of Letters and Science
“Chemical Modulation of Bacterial Cell Division”

1:55-2:10 *Johan Leveau*
Department of Plant Pathology
College of Agricultural and Environmental Sciences
“Dialog and dialect in bacterial-fungal interactions”

2:15-2:25 *Mariana Xavier* (Tsolis lab)
Department of Medical Microbiology and Immunology
School of Medicine
“Anti-inflammatory role of macrophages through secretion of interleukin-10 during early *Brucella abortus* infection”

2:30-2:40 *Christine Hastey* (Baumgarth lab)
Department of Pathology, Microbiology and Immunology, Center for Comparative Medicine
School of Veterinary Medicine
“The T cell (in)dependent B cell response following *Borrelia burgdorferi* infection”

- 2:45-2:55 *Hiutung Chu* (Bevins Lab)
Department of Medical Microbiology and Immunology
School of Medicine
“A novel mechanism in defensin-mediated mucosal immunity: human defensin 6 protects by self-assembled peptide nanonets”
- 3:00-3:30pm Break** *
- 3:30-5:30pm Scientific Session 2 (Mountain Room)** *
- Moderator: Shirley Luckhart*, Department of Medical Microbiology and Immunology,
School of Medicine
- 3:30-3:45 *Stephen McSorely*
Department of Veterinary Anatomy, Center for Comparative Medicine
School of Veterinary Medicine
“Visualizing adaptive immune responses to bacteria”
- 3:50-4:05 *Scott Dawson*
Department of Microbiology
College of Biological Sciences
“Investigating the mechanism of host attachment in *Giardia*”
- 4:10-4:25 *Dennis Hartigan-O'Connor*
Department of Medical Microbiology and Immunology
School of Medicine
“Adaptive immunity and mucosal integrity in SIV infection”
- 4:30-4:40 *Marijke Kestra* (Bäumler lab)
Department of Medical Microbiology and Immunology
School of Medicine
“A *Salmonella* virulence factor activates the Nod1/Nod2 Signaling Pathway ”
- 4:45-4:55 *Meenu Padmanabhan* (Dinesh-Kumar Lab)
Department of Plant Biology and Plant Sciences
College of Biological Sciences
“Nuclear function of plant innate immune receptors”

5:00-5:10 *Mary Moore* (Solnick lab)
Department of Medicine, Division of Infectious Diseases, Center for Comparative
Medicine
School of Medicine
"Host Factors Affect *Helicobacter pylori* Outer Membrane Protein Expression During
Experimental Infection"

5:15-5:25 *Jennifer Chau* (Luckhart lab)
Department of Medical Microbiology and Immunology
School of Medicine
"Malaria-induced intestinal permeability: a precursor for *Salmonella* bacteremia?"

5:30-6:15pm Break and Poster setup (Lake Room) *

6:15-7:15pm Keynote Address (Mountain Room) *

Moderator: **Jay Solnick**, Department of Medicine, Division of Infectious Diseases, Center
for Comparative Medicine, School of Medicine

6:15-7:05 **Greg Barton**
Assistant Professor, Department of Molecular and Cell Biology
University of California at Berkeley

7:15-8:30pm Dinner (Granhall) *

8:30-10:30pm Poster Session (Lake Room) *

10:30pm-1:00am Social (Big Pine) *

October 14

7:30-9:00am **Breakfast (Granhall)** *

9:00-10:15am **Scientific Session 3 (Mountain-Lake Conference Room)** *

Moderator: Johan Leveau, Department of Plant Pathology, College of Agricultural and Environmental Sciences

9:00-9:20

Anton Cornel

Department of Entomology

College of Agricultural and Environmental Sciences

“Vector-host relationships in Avian Malaria: a synopsis of how little we know”

9:25-9:30

Volkmar Heinrich

Department of Biomedical Engineering

College of Engineering

“Immunophysical approach provides new insight into innate interactions of leukocytes with their chemotactic and phagocytic targets”

9:35-9:45

Jennifer Luff (Barthold lab)

Department of Pathology, Microbiology and Immunology

School of Veterinary Medicine

“The canine keratinocyte: an innate immune powerhouse”

9:50-10:00

Irina Grishina (Dandekar lab)

Department of Medical Microbiology and Immunology

School of Medicine

“The role of the serotonergic response in SIV enteropathogenesis”

10:05-10:15

Daniel Lin (Coaker Lab)

Department of Plant Pathology

College of Agricultural and Environmental Sciences

“Kinases in Plant Immunity”

10:20-10:50am **Coffee Break** *

10:50-11:35am Keynote Address (Mountain-Lake Conference Room) *

Moderator: **Satya Dandekar**, Department of Medical Microbiology and Immunology, School of Medicine

10:50-11:30 **James E. K. Hildreth**
Dean, College of Biological Sciences

11:35am-1:00pm Scientific Session 4 (Mountain-Lake Conference Room) *

Moderator: **Satya Dandekar**, Department of Medical Microbiology and Immunology, School of Medicine

11:35-11:45 *Cameron Johnson* (Sundaresan Lab)
Department of Plant Biology and Plant Sciences
College of Biological Sciences
“Detecting an Adaptive Response of Rice to its Microbiome”

11:50-12:00 *Tim Carroll* (Miller lab)
Department of Pathology, Microbiology and Immunology
School of Veterinary Medicine
“A cationic lipid/DNA adjuvant dramatically enhances the effectiveness of an inactivated influenza virus vaccine in elderly rhesus macaques”

12:15-1:30pm Lunch (Granhall) *

* **POSTER SESSION (Mountain Room, 8:00-10:30pm)** *

SIZE OF POSTER BOARDS: 4'x8'; POSTER SIZE: 4'x4'

"TLR5 enhances flagellin-specific adaptive immunity" **Shaikh Atif**

"Activation of the caspase-1 inflammasome by the *Brucella* type IV secretion system" **Vidya Atluri**

"Shifts in Gut Microbiome Community Dynamics: A New Paradigm for Giardiasis" **Nanelle Barash**

"Self-assembled peptide nanonets: a new mechanism in defensin-mediated mucosal immunity" **Hiutung Chu**

"The *Brucella* effector VceB interacts with Lyric/AEG-1 in the Endoplasmic Reticulum of host cells and inhibits NF-kappa B activation" **Maarten de Jong**

"Large-scale real time expression study of *Mycobacterium tuberculosis*" **Xinran Dong**

"Quantative Proteomics Reveals Dynamic Changes at the Plasma Membrane During Plant Immune Responses" **James M. Elmore**

"SIV infection causes rapid changes in miRNA expression in the gastrointestinal tracts of rhesus macaques" **Christopher Gaulke**

"Evidence of IacA Activity in Catabolism of Indole-3-Acetic Acid" **Isaac Greenhut**

"Glyceraldehyde-3-phosphate dehydrogenase: Role in Plant Disease Resistance" **Elizabeth Henry**

"Early gut mucosal immune responses to SIV" **Lauren Hirao**

"Target-specific interactions of leukocytes with model pathogens and fungi" **Cheng-Yuk Lee**

"*Yersinia enterocolitica* effector Yspl influences Focal Adhesion Kinase function" **Karen LeGrand**

"Tracking Antigen-specific CD4 T Cell Response in *Chlamydia muridarum* Infection" **Linxi Li**

"HopQ1-1 is a chloroplast-localized type III effector that alters host nucleoside metabolism and promotes bacterial virulence" **Wei Li**

"Receptor like cytoplasmic kinases in plant innate immunity" **Zuh-Jyh Dan Lin**

"*Salmonella* and Malaria co-infection model" **Kristen Lokken**

"Nitrate respiration and *Salmonella* outgrowth in the inflamed gut" **Christopher Lopez**

"Impact of drip delivered pro and antibiotic agents on soil microbiota and tomato root health" **Nilesh Maharaj**

"Host Factors affects *Helicobacter pylori* outer membrane protein expression during experimental infection" **Mary Moore**

"Mechanisms of IFN γ production in response to LPS during infection" **Hope O'Donnell**

"A role of Mucosal NKT cells during acute *Salmonella* infection" **Alanna O'Leary**

"Ingested human insulin inhibits the mosquito innate immune response to *Plasmodium falciparum*" **Nazzy Pakpour**

"Suppression of Host Innate Immunity by the HCV -2/+1 Frame" **Seung Bum Park**

"Insulin-like Peptides in the Mosquito *Anopheles stephensi*: Identification and Characterization in Response to Diet and Infection with *Plasmodium falciparum*" **Jose Pietri**

"TviA reduces Host Immune Recognition during *S. Typhi* Infection" **Victor Poon**

"Spatial and temporal variability in bacterial populations associated with leaves of field-grown Romaine lettuce (*Lactuca sativa*): implications in food safety and pathogen control" **Gurdeep Rastogi**

"*Salmonella enterica* serovar Typhimurium energy taxis during growth in the inflamed intestine" **Fabian Rivera**

"Regulation of Pef-fimbriae in *Salmonella enterica* serotype Typhimurium" **Kim Nguyen and Torsten Sterzenbach**

"Culture-dependent and independent analysis of the microbiota associated with grape leaves and berries" **Jan Jensen Tech**

"Visualizing the monoclonal nature of bacterial aggregates on plant leaves" **Robin Tecon**

"Inflammation makes new nutrients accessible to *Salmonella*: Ethanolamine & 1,2-propanediol utilization foster outgrowth over the microbiota" **Parameth Thiennimitr and Franziska Faber**

"The *Salmonella* Effector Protein SipA activates the NOD1 signaling pathway" **Maria Winter and Josef Auburger**

"Anaerobic nitrate respiration provides a growth advantage for *Enterbacteriaceae* during non-infectious inflammatory diarrhea" **Sebastian Winter**