

**7th Annual UC Davis Research Retreat on Host Microbe Interaction
(HMI)
Granlibakken, October 18th-19th, 2012**

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:

Nicole Baumgarth, D.V.M, Ph.D., Professor, Pathology, Microbiology and Immunology, Center for Comparative Medicine

Charles Bevins, M.D., Ph.D., Chair, Graduate Group Immunology

Shirley Luckhart, Ph.D., Director of Training Program in the Biology of Disease Vectors

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

Jay Solnick, M.D., Ph.D., Director, Animal Models of Infectious Disease Training Grant

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

We would like to acknowledge support from:

The School of Medicine Deans Office

The School of Veterinary Medicine Deans Office

The Graduate Group Microbiology (1st year students)

The Animal Model of Infectious Disease Training Grant (Keynote Speaker)

The Department of Medical Microbiology and Immunology

PROGRAM 2012 UC DAVIS HMI RETREAT

October 18

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

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

Moderator: ***Richard Michelmore***

1:00 **Opening Address**

1:15-1:30 *Savithamma P Dinesh-Kumar*

Department of Plant Biology and Plant Sciences

College of Biological Sciences

Title: "Autophagy targets mitochondrial protein BI2 to limit cell death during the plant immune response."

1:40-1:55 *Emanual Maverakis*

Department of Dermatology

School of Medicine

Title: TBA

2:05-2:15 *Kristen Lokken (Tsolis lab)*

Department of Medical Microbiology and Immunology

School of Medicine

Title: "Malaria Parasite-Induced IL-10 Contributes to Non-typhoid Salmonella Bacteremia"

2:20-2:30 *Minelva Nanton (McSorely lab)*

Department of Veterinary Anatomy (Center for Comparative Medicine)

School of Veterinary Medicine

Title: "An Unusual Role for B cells in *Salmonella* Immunity"

- 2:35-2:45 *Robin Tecon* (Leveau lab)
Department of Plant Pathology
College of Agricultural and Environmental Sciences
Title: "Characterization of a new type of clustering behavior in plant-associated bacteria"
- 2:50-3:20pm Break ***
- 3:20-4:45pm Scientific Session 2 (Mountain Room) ***
Moderator: **Charles Bevins**
- 3:20-3:35 *Richard Michelmore*
Department of Plant Sciences (Genome Center)
College of Agricultural and Environmental Sciences
Title: "Comparative genomics of plant-pathogen interactions"
- 3:45-3:55 *Anna Drexler* (Luckhart lab)
Department of Medical Microbiology and Immunology
School of Medicine
Title: "The effects of human insulin-like growth factor 1 on mosquito lifespan and malaria parasite transmission."
- 4:00-4:10 *Megan Eberhardt* (Barry lab)
Department of Pathology
School of Medicine
Title: "Targeting the IL-10 Signaling Pathway as a Vaccine Strategy for Cytomegalovirus"
- 4:15-4:25 *Rebecca Elsner* (Baumgarth lab)
Department of Pathology, Microbiology and Immunology (Center for Comparative Medicine)
School of Veterinary Medicine
Title: TBA
- 4:30-4:40 *Fabian Rivera-Chávez* (Bäumler lab)
Department of Medical Microbiology and Immunology
School of Medicine
Title: "Salmonella uses energy taxis to benefit from intestinal inflammation"

4:45-5:45pm Break and Poster setup (*Lake Room*) *

5:45-6:45pm Keynote Address (*Mountain Room*) *

Sponsored by the Animal Models of Infectious Disease Training Grant

*Moderator: Shirley Luckhart, Department of Medical Microbiology and Immunology,
School of Medicine*

5:50-6:45

David Schneider

Professor, Department of Microbiology and Immunology
Stanford University

7:00-8:00pm Dinner (*Granhall*) *

8:00-10:30pm Poster Session (*Lake Room*) *

10:30pm-1:00am Social (*Ski Hut*) *

October 19

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

9:00-10:05am ***Scientific Session 3 (Mountain-Lake Conference Room)*** *

Moderator: ***Nicole Baumgarth***

9:00-9:15 Ioannis Stergiopoulos
Department of Plant Pathology
College of Agricultural and Environmental Sciences
Title: "Host specificity and secreted proteins: Using Dothideomycetes as model organisms to study the genetics, genomics and evolution of plant-microbe interactions"

9:25-9:35 *Miriam Martin* (Solnick lab)
Department of Medicine (Center for Comparative Medicine)
School of Medicine
Title: "Clash of the Titans: Competition between *Helicobacter* species and other inhabitants of the rhesus stomach"

9:40-9:50 *Christopher Gaulke* (Satya Dandekar lab)
Department of Medical Microbiology and Immunology
School of Medicine
Title: "Gut epithelial barrier disruption in retrovirus infection through microRNA dysregulation"

9:55-10:05 *Raj Nandety* (Falk lab)
Department of Plant Pathology
College of Agricultural and Environmental Sciences
Title: "Next Generation Sequencing : Integrative host-microbe genomics on two different viruses associated with the glassy-winged sharpshooter"

10:10-10:35am ***Coffee Break*** *

10:35am-12:00pm Scientific Session 4 (Mountain-Lake Conference Room)

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Moderator: Satya Dandekar

10:35-11:05

Amilcar Tanuri

Universidade Federal do Rio de Janeiro (UFRJ)

Title: "Reactivation of HIV Latency with a new compound extracted from Euphorbiaceae sp."

11:15-11:25

Hossein Gouran (Abhaya Dandekar lab)

Department of Plant Biology and Plant Sciences

College of Biological Sciences

Title: "A Novel Bacterial Secretion System May Cause Pierce's Disease in Grapevine"

11:30-11:40

Myka Estes (McAllister lab)

Department of Neurology (Center for Neuroscience)

School of Medicine

Title: "IL-1beta and IL1RAPL1: Gene-environment interactions regulating synapse density and function in Autism"

11:45-11:55

Dan Garrido (Mills lab)

Department of Viticulture and Enology

College of Agricultural and Environmental Sciences

Title: "New insights into the molecular adaptations of infant-associated bifidobacteria to human milk glycoconjugates"

12:00-1:00pm

Lunch (Granhall)

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

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

Acute Cellular Responses during Salmonella infection in the streptomycin-treated mouse model, **Alanna Spees**

The Toxoplasma Oocyst: Mechanisms of Environmental Resistance, **Allison Weis**

Bifidobacterium bididum impacts "expression of antimicrobial peptides and development of intestinal microbiota in a rat model of necrotizing enterocolitis", **Anchasa Kananurak**

Immunological regulation of p38MAPK pathway in Anopheles stephensi during parasite infection, **Bo Wang**

Gut epithelial barrier disruption in retrovirus infection through microRNA dysregulation, **Christopher Gaulke**

Phage-Mediated Acquisition of a Type III Secreted Effector Protein Boosts Growth of Salmonella by Providing Access to a Host-Derived Respiratory Electron, **Christopher Lopez**

Dissecting HIV-1 transmission through the virological synapse using super-resolution and live 3D imaging, **Deanna Thompson**

The role of abscisic acid in the mosquito immune response to malaria parasite infection, **Elizabeth Glennon**

The effects of PTEN upregulation in epithelial tissues on Anopheles stephensi Plasmodium susceptibility and various physiological traits, **Eric Hauck**

Salmonella requires de novo synthesis of vitamin B12 to outgrow intestinal microbiota during inflammation, **Franziska Faber**

Innate amplification of Th1 responses to intracellular pathogens, **Hope O'Donnell**

A novel bacteria secretion system may cause Pierce's Disease in grapevine, **Hossein Gouran**

Effect of a plant defense activator on BBWV-1 infection, **Immaculada Ferriol Safont**

Malaria-induced IL-10 alters intestinal inflammatory responses to non-typhoidal Salmonella, **Jason Mooney**

Targeted knockdown of MAP kinase signaling in the midgut of Anopheles stephensi using morpholinos, **Jose Peitri**

Revealing the structure of root-associated bacterial communities in rice, **Joseph Edwards**

Host-Commensal Dynamics in SIV infection, **Lauren Hirao**

Bacterial manipulation of small Rho GTPases is pathogen-induced process detected by the NOD1 signaling pathway, **Maria Winter**

Induction of alternatively activated macrophages during murine Brucellosis contributes to bacterial survival and development of chronic infection, **Mariana Xavier**

Bacterial manipulation of small Rho GTPases is pathogen-induced process detected by the NOD1 signaling pathway, **Marijke Keestra**

Binding of *P. falciparum* to Human Endothelial Cells in culture, **Michael Leibowitz**

Protective B cell Responses during Salmonella Infection, **Minelva Nanton**

Temporal dynamics of the rhesus gastric microbiome, **Miriam Martin**

The role of the protein kinase C superfamily in the innate immune response to Anopheline mosquitoes, **Nazzy Pakpour**

Food From the Fire: Gut Inflammation Provides Nutrients for Salmonella, **Parameth Thiennimitr**

Non-functional CD4+ T helper cell responses to *B. burgdorferi* infections, **Rebecca Elsner**

UC Davis Genome Center Proteomics Core, **Richard Eigneheer**

Transcriptional regulation of latent HIV in peripheral CD4+ T lymphocytes, **Samantha McDonnell**

Microbiota changes in the inflamed intestine are driven by anaerobic respiration, **Sebastian Winter**

RNAi targeting a virus L-Pro confers hosting immunity, **Sophie Kiss**

Salmonella Typhi evades complement-dependent neutrophil immunosurveillance, **Tamding Wangdi**

Genes encoding a predicted modification system for membrane lipids contribute to pathogenesis of *Brucella melitensis*, **Tobias Kerrines**

Hierarchical regulation of fimbriae in *Salmonella enterica* serotype Typhimurium via a novel CsrA titration mechanism, **Torsten Sterzenbach**

Brucella and the Inflammasome, **Vidya Atluri**