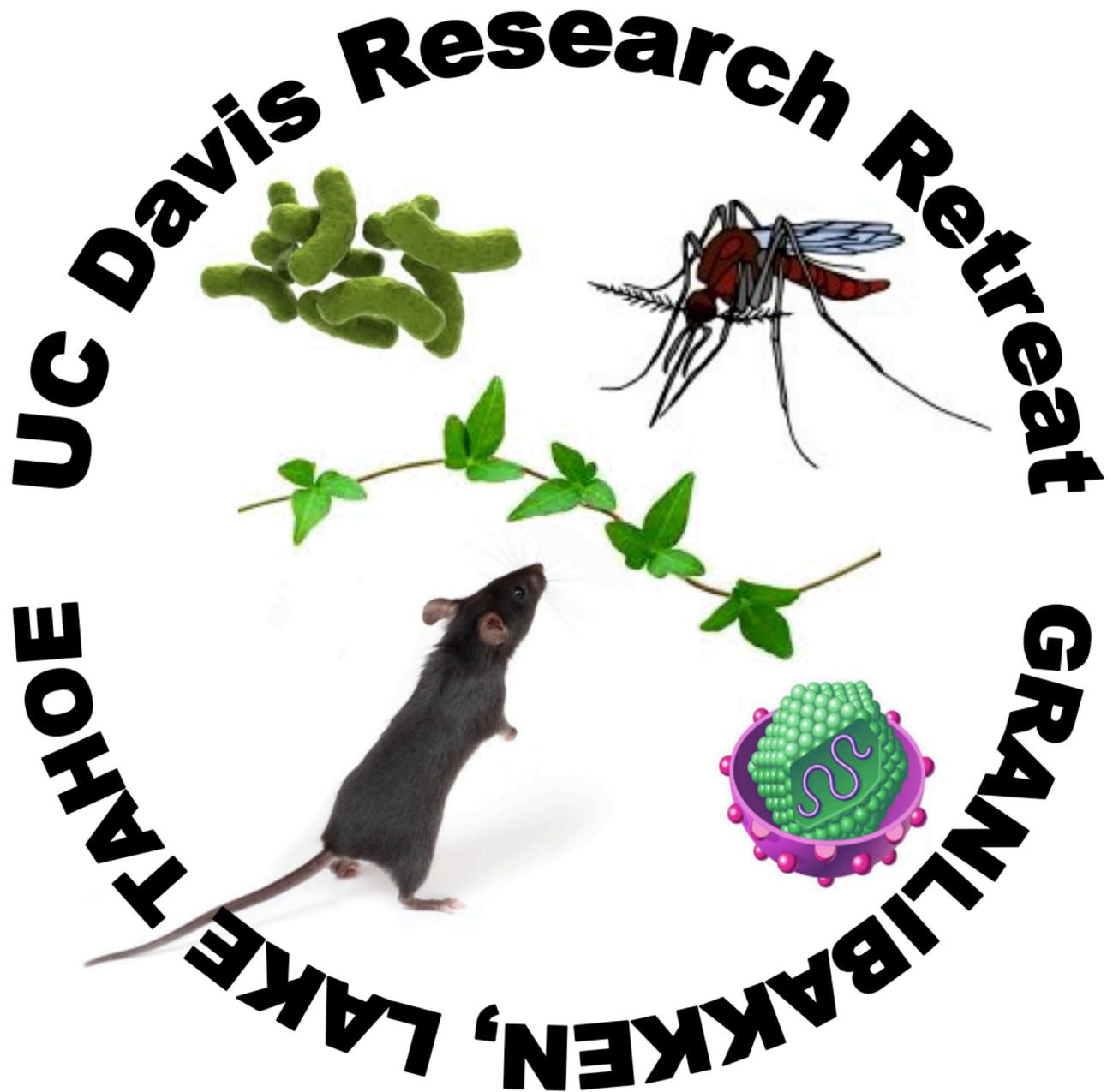


PROGRAM



October 17th to 18th, 2013



8th Annual UC Davis Research Retreat on Host Microbe Interaction (HMI)

Granlibakken, October 17th-18th, 2013

ORGANIZING COMMITTEE

Co-Chairs:

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

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

Members:

Nicole Baumgarth, D.V.M., Ph.D., Professor and Director, Center for Comparative Medicine

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

Dori Borjesson, D.V.M., Ph.D., Professor and Chair, Pathology, Microbiology and Immunology

Gitta Coaker, Ph.D., Assistant Professor, Plant Pathology

Johan Leveau, Ph.D., Assistant Professor, Plant Pathology

Shirley Luckhart, Ph.D. Professor, Medical Microbiology and Immunology

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

Richard Pollard, M.D., Professor and Chief, Infectious Diseases

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

Yilma Tilahun, D.V.M., Ph.D., Distinguished Professor, Pathology, Microbiology and Immunology

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



PROGRAM 2013 UC DAVIS HMI RETREAT

October 17

- 12:00pm** **Opening Reception and Lunch (Granhall)**
- 1:00-2:50pm** **Scientific Session 1 (Mountain Room)**
Moderator: ***Maria Marco***, Department of Food Science and Technology
- 1:00** **Opening Address**
- 1:15-1:35** ***Mark Underwood***
Department of Neonatology
School of Medicine
Title: Dysbiosis and inflammation in necrotizing enterocolitis
- 1:45-1:55** ***Sarah Totten*** (Lebrilla lab)
Department of Chemistry
College of Letters and Sciences
Title: Characterizing the Bacterial Consumption of Human Milk Oligosaccharides Using nano-LC Chip-TOF Mass Spectrometry
- 2:00-2:10** ***Zach Lewis*** (Mills lab)
Department of Viticulture and Enology
College of Agricultural and Environmental Sciences
Title: Maternal *FUT2* (Secretor) Status Influences Gut Microbial Communities of Breast-fed Infants
- 2:15-2:25** ***Franzika Faber*** (Bäumler lab)
Department of Medical Microbiology and Immunology
School of Medicine
Title: The inflamed intestine as *Salmonella's* candy store

2:30-2:40

Miguel DeLucas (Brady Lab)

Department of Plant Pathology

College of Agricultural and Environmental Sciences

Title: Getting into the roots of Polycomb regulation

2:50-3:20pm

Break

3:20-4:40pm

Scientific Session 2 (Mountain Room)

Moderator: **Stephen McSorley**, Department of Veterinary Anatomy, CCM

3:20-3:30

Hope O'Donnell (McSorely lab)

Department of Veterinary Anatomy (Center for Comparative Medicine)

School of Veterinary Medicine

Title: Crisis Mode: The non-cognate response of Th1 cells during infection

3:35-3:45

Lattha Souvannaseng (Luckhart lab)

Department of Medical Microbiology and Immunology

School of Medicine

Title: Ubiquity of population-specific mutations in the immune signaling genes among chromosomal forms of *Anopheles gambiae*

3:50-4:00

Vanessa Yenson (Baumgarth lab)

Department of Pathology, Microbiology and Immunology (Center for Comparative Medicine)

School of Veterinary Medicine

Title: Differentiation pathways of innate-like B-cells in health and disease

4:05-4:15

Mary Moore (Solnick lab)

Department of Medicine (Center for Comparative Medicine)

School of Medicine

Title: Environmental Determinants of Transformation Efficiency in *Helicobacter pylori*

4:20-4:30

Tobias Kerinnes (Tsolis lab)

Department of Medical Microbiology and Immunology

School of Medicine

Title: Membrane modification and persistence in *Brucella melitensis*

4:40-5:30pm Break and Poster setup (Lake Room)

5:30-6:30pm Keynote Address (Mountain Room)

Moderator: **Christopher Lopez** (Bäumler lab), Department of Medical Microbiology and Immunology, School of Medicine

5:30-6:20 **Manuela Raffatellu**

University of California Irvine School of Medicine

Title: Host, Germs and Steel: *Salmonella* and metal in the inflamed gut

6:30-8:00pm Dinner (Granhall)

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

10:30pm- Social (Ski Hut)

1:00am

October 18

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

9:15-10:30am Scientific Session 3 (Mountain Conference Room)

Moderator: **Nicole Baumgarth**, Department of Pathology, Microbiology and Immunology, CCM

9:15-9:25 **Jesse Deere** (Barry lab)

Pathology (Center for Comparative Medicine)

School of Medicine

Title: Development of an SIV Vaccine Using an Adjuvanted RhCMV Expressing a TLR5 Ligand

9:30-9:40 **Bokyoung Lee** (Marco lab)

Department of Food Science and Technology

College of Agricultural and Environmental Sciences

Title: Milk-mediated effects on probiotic *Lactobacillus* in the gut

9:45-9:55 **Hossein Gouran** (Abhaya Dandekar lab)

Department of Plant Biology and Plant Sciences

College of Biological Sciences

Title: Secreted Virulence Factors and the Pathobiology of Pierce's Disease

10:00-10:10 **Lauren Hirao** (Satya Dandekar lab)

Department of Medical Microbiology and Immunology

School of Medicine

Title: Impact of HIV on host mucosal sensing

10:15-10:25 **David Coil** (Eisen lab)

Department of Evolution and Ecology, Genome Center

College of Biological Sciences

Title: Microbes in the Built Environment

10:30-11:00am Coffee Break

11:00am-12:00pm Scientific Session 4 (Mountain Conference Room)

Moderator: **Abhaya Dandekar**, Department of Plant Biology and Plant Sciences

11:00-11:10

Tim Carroll (Chris Miller lab)

Department of Pathology Microbiology and Immunology (CCM, CNPRC)

Title: Eliciting broadly protective antibodies in a Rhesus macaque model for human influenza

11:15-11:25

Björn Schröder (Bevins lab)

Department of Medical Microbiology and Immunology

School of Medicine

Title: Reduced to action: Human defensins in the gut

11:30-11:40

Abraham Morales-Cruz (Cantu lab)

Department of Viticulture and Enology

College of Agricultural and Environmental Sciences

Title: Pathogenomics of grapevine trunk diseases

11:45-11:55

Nilesh Maharaj (Leveau lab)

Department of Plant Pathology

College of Agricultural and Environmental Sciences

Title: Impact of subsurface drip injected biological and chemical control agents on bulk soil microbiota in processing tomato fields

12:00-1:30pm

Lunch (Granhall)

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POSTER SESSION (Lake Room - 8:00-10:30pm)

Poster Judges: *Renée M. Tsolis*, Department of Medical Microbiology and Immunology
Maria Marco, Department of Food Science and Technology
Shirley Luckhart, Department of Medical Microbiology and Immunology

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

Bacterial Outer-Membrane vesicles are potent inducers of plant immunity, **Ofir Bahar**

C. rodentium Secreted Effectors Regulate Host Rho GTPases and Modulate the Innate Immune response during Enteric Infection, **Alfredo Chavez**

Network-Guided Predictions and characterization of Genes Governing PRR-Mediated Immunity in Cereals, **Arsalan Daudi**

Development of an SIV Vaccine Using an Adjuvanted RhCMV Expressing a TLR5 Ligand. **Jesse Deere**

Inhibition of Salmonella-Specific T and B cells by *Salmonella* Infection, **Zachary Fogassy**

Intestinal epithelial barrier disruption through altered mucosal microRNA expression in HIV and SIV infections, **Christopher Gaulke**

The UC Davis Host Microbe Systems Biology Core, **Michael George**

Role of *x. fastidiosa* PD1 in Quorum Sensing and Pathogenicity to Grapevine, **Hyrum Gillespie**

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

Identification and characterization of protein kinases that have a possible role in Xa21-mediated immunity, **Gena Hoffman**

Manipulation of small Rho Gtpases is a pathogen-induced process detected by Nod1, **Marijke Kestra**

Establishment of IRF7 overexpression chicken cell lines using piggyBac transportation system, **Taehyun Kim**

TBA, **Christopher Lopez**

Involvement of the RaxSTAB type I secretion system in *Xanthomonas* pathogenesis and host interaction, **DeeDee Luu**

Malaria Parasite-Induced IL-10 Contributes to Non-typhoid *Salmonella* Bacteremia, **Kristen Lokken**

Loss of Vaccine-mediated Protection against *S. Typhimurium* during Malaria, **Jason Mooney**

Dam-and nursery-reared infant Rhesus macaque show differences in gut microbiota and immune system development, **Nicole Narayan**

Innate induction of Th1 effector responses: NLRs and TLRs converge, **Hope O'Donnell**

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Continued: POSTER SESSION (Lake Room - 8:00-10:30pm)

Innate stimulation of CD4 T cells correlates with enhanced production of IL-18 in an NLR-dependent manner, **Oahn Pham**

Insulin-like peptides in the midgut of *A. stephensi*: Inducible synthesis and regulation of *P. falciparum* infection, **Jose Pietri**

Consumption of fucosyllactose by infant-borne bifidobacteria, **Mina Popovic**

L-Arginine dependent effects on malaria parasite transmissibility and mast cell mediated immunity, **Rashaun Potts**

Structural analysis of the rice LRR OsSERK2, **Rory Pruitt**

Relapsing *Salmonella* Typhimurium infection after successful antibiotic treatment, **Marietta Ravesloot**

Salmonella Uses Energy Taxis to Benefit from Intestinal Inflammation, **Fabian Rivera**

A novel CsrA titration mechanism regulates fimbrial gene expression in *Salmonella enterica* serotype Typhimurium, **Torsten Sterzenbach**

Role of Respiration on *Citrobacter rodentium* Outgrowth in the Inflamed Intestine, **Eric Velasquez**

Evasion of complement c5a-dependent neutrophil chemotatic response by *Salmonella typhi*, **Tamding Wangdi**

p38 MAPK Signaling Confers Tolerance in *Anopheles stephensi* during Plasmodium Infection, **Bo Wang**

Lung Transcriptome following Avian Influenza Virus Infection in Two Genetically Distinct Chicken Inbred Lines using RNA-seq, **Ying Wang**

ER stress sensing as an innate immune response, **Mariana Xavier**