UC Davis Research Retreat
GRANTIBAKKEN, LAKE TAHOE

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 Bäumler, 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
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: Dysbosis 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
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
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>4:40-5:30pm</td>
<td>Break and Poster setup (Lake Room)</td>
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<tr>
<td>5:30-6:30pm</td>
<td>Keynote Address (Mountain Room)</td>
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<td>Moderator: Christopher Lopez (Bäumler lab), Department of Medical Microbiology and Immunology, School of Medicine</td>
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<td>5:30-6:20</td>
<td>Manuela Raffatellu</td>
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<td>University of California Irvine School of Medicine</td>
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<td>Title: Host, Germs and Steel: <em>Salmonella</em> and metal in the inflamed gut</td>
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<td>6:30-8:00pm</td>
<td>Dinner (Granhall)</td>
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<td>8:00-10:30pm</td>
<td>Poster Session (Lake Room)</td>
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<td>10:30pm-1:00am</td>
<td>Social (Ski Hut)</td>
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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  Bokyung 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)
* 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 Keestra

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 Protecion 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
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**