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
PROGRAM 2016 UC DAVIS HMI RETREAT

October 27

12:00pm Opening Reception and Lunch (Granhall)

1:00-3:15pm Scientific Session 1 (Mountain Ballroom/Conference Room)

Moderator: Renée Tsolis, Department of Medical Microbiology and Immunology

1:00 Opening Address

1:15-1:40 Stefan Rothenburg
Department of Medical Microbiology and Immunology
School of Medicine
Title: Everything you always wanted to know about species-specific host-pathogen interactions* (*but were afraid to ask)*

1:40-2:05 Stephen McSorley
Department of Anatomy, Physiology and Cell Biology (Center for Comparative Medicine)
School of Veterinary Medicine
Title: Investigating the secret immunological army

2:05-2:30 Bennett Penn
University of California San Francisco
Title: Discovery of Novel M. tuberculosis-Host Interactions Using Proteomics

2:30-2:45 Phylicia Robins (Gelli lab)
Department of Pharmacology
School of Medicine
Title: An EPH-Tyrosine Kinase Receptor-Activated Pathway Mediates Transmigration of C.neoformans Across the Blood-Brain Barrier
2:45-3:00  
**Mariana Byndloss** (Bäumler lab)  
Department of Medical Microbiology and Immunology  
School of Medicine  
Title: Epithelial PPAR-γ signaling mediates colonization resistance against *Enterobacteriaceae*

3:00-3:15  
**Emma Skoog** (Solnick lab)  
Department of Medicine (Center for Comparative Medicine)  
School of Medicine  
Title: Functional plasticity in the *Helicobacter pylori* type IV secretion system is mediated by alterations in integrin binding

3:15-3:45pm  
Break

3:45-5:45pm  
**Scientific Session 2 (Mountain Conference Room)**  
Moderator: **Stephen McSorley**, Department of Anatomy, Physiology and Cell Biology (Center for Comparative Medicine)

3:45-4:10  
**Renée Tsolis**  
Department of Medical Microbiology and Immunology  
School of Medicine  
Title: The role of malnutrition in susceptibility to disseminated Salmonella infection

4:10-4:35  
**Sungjin Kim**  
Department of Medical Microbiology and Immunology (Center for Comparative Medicine)  
School of Medicine  
Title: A novel natural killer cell subset with potent anti-viral activity.

4:35-5:00  
**Rachel Vannette**  
Department of Entomology and Nematology  
College of Agricultural and Environmental Sciences  
Title: Linking community assembly and function using nectar-inhabiting microbial communities
5:00-5:15  
*Thomas Liebrand* (Coaker lab)  
**Department of Plant Pathology**  
College of Agricultural and Environmental Sciences  
Title: Phosphoproteomic profiling reveals regulatory mechanisms of membrane-associated proteins during plant NLR-mediated immunity

5:15-5:30  
*Debanjan Mukhopadhyay* (Saeij lab)  
**Department of Pathology Microbiology and Immunology**  
School of Veterinary Medicine  
Title: Modulation of the host immune response by *Toxoplasma* secreted dense granule proteins

5:30-5:45pm  
Break

5:45-6:45pm  
**AMID T32-sponsored Keynote Lecture**  
**Moderator:** *Andreas Bäumler*, Department of Medical Microbiology and Immunology

5:45-6:45  
*Daniel Portnoy*  
**University of California Berkeley**  
Title: Listeriolysin O: A phagosome-specific lysin

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

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

10:30pm-  
Social (Ski Hut)

1:00am
October 28

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

9:00-10:50am  Scientific Session 3 (Mountain Ballroom/Conference Room)

Moderator: Stefan Rothenburg, Department of Medical Microbiology and Immunology

9:00-9:25  Roger Sciammas
Department of Anatomy, Physiology and Cell Biology
School of Veterinary Medicine
Title: Deconstructing the antibody response

9:25-9:50  Maria Marco
Department of Food Science and Technology
College of Agricultural and Environmental Sciences
Title: Intestinal and systemic responses to dietary Lactobacillus

9:50-10:05  Paolo Zaini (A. Dandekar lab)
Department of Plant Biology and Plant Sciences
College of Biological Sciences
Title: Exploring OMICs and microfluidic technologies to study plant-bacteria interactions

10:05-10:20  Hannah Savage (Baumgarth lab)
Department of Pathology Microbiology and Immunology (Center for Comparative Medicine)
School of Veterinary Medicine
Title: Uncovering the true phenotype of pathogen-reactive innate-like B cells

10:20-10:35  Chris Nosala (Dawson lab)
Department of Microbiology and Molecular Genetics
College of Biological Sciences
Title: Giardia sucks: form and function of a parasite attachment organelle

10:35-10:50am  Coffee Break
10:50 am-12:00pm Scientific Session 4 (Mountain Ballroom/Conference Room)

Moderator: Satya Dandekar, Department of Medical Microbiology and Immunology

10:50-11:15  
**Qizhi Gong**  
Department of Cell Biology and Human Anatomy  
School of Medicine  
Title: Preventing viral invasion into the brain via olfactory nerve

11:15-11:30  
**Katti Horng** (S. Dandekar lab)  
Department of Medical Microbiology and Immunology  
School of Medicine  
Title: HIV and microbiota: awakening the Force within

11:30-11:45  
**Neeraj Lal** (Dinesh-Kumar lab)  
Department of Plant Biology and Plant Sciences  
College of Biological Sciences  
Title: RLCK in the cross fire: the dichotomy of growth and defense

11:45-12:00  
**Maria Maldonado-Gomez** (Mills lab)  
Department of Food Science and Technology  
College of Agricultural and Environmental Sciences  
Title: Stable engraftment of *Bifidobacterium longum* AH1206 in the human gut depends on individualized features of the resident microbiome

12:00-1:30pm  
**Lunch (Granhall)**
POSTER SESSION (Bay Room - 8:00-10:30pm)

Poster Judges:

**Bennett Penn**, University of California San Francisco

**Sungjin Kim**, Medical Microbiology and Immunology, CCM

**Roger Sciammas**, Anatomy, Physiology and Cell Biology, CCM

**Yael Litvak**, Medical Microbiology and Immunology

**Maria Marco**, Department of Food Science and Technology

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

1. Making a Fit, Resistant Mosquito by Inhibiting JNK Activation, **Heather Baker**

2. Antibiotic Treatment Adversely Affects Tissue-Resident Memory Cell Development and Protective Immunity to Salmonella Infection, **Joseph Benoun**

3. *Salmonella* anaerobic β-oxidation operon (*ydiQRSTD*) confers a fitness advantage in vivo, **Denise Bronner**

4. Western Diet induced gut oxygenation drives dysbiosis, **Austin Byndloss**

5. Development of Monoclonal Antibody For Canine PD-1/PD-L1 Blockade Therapy, **Jin Wook Choi**

6. The role of IRF4 in Affinity Maturation, **Sarah Cook**

7. A Novel Strategy to Eliminate Latent HIV Reservoir, **Maher Elsheikh**

8. Aerobic and anaerobic respiration synergize to promote intestinal growth of *Salmonella*, **Franziska Faber**

9. Loss of Monoclonal CD4 T cells During Infection with Salmonella, **Zachary Fogassy**

10. Functional Responses between Conventional NK Cells and FcRy-Deficient NK Cells in Humans and Rhesus Macaques, **Suyeon Hong**

11. Differences in the pre-weaning gut microbiomes of dairy and beef calves, **Daisy Johnson**

12. Molecular mechanisms of human milk oligosaccharide utilization by *Bifidobacterium longum* subsp. *longum* SC596 and *Bifidobacterium breve* SC95, **Nina Kirmiz**

13. Integrative analysis of gut microbiota and barrier function to unravel the beneficial effects of milk oligosaccharides on the diet-induced obesity (DIO) phenotype, **Trina Knotts**

14. Transcriptional regulation of T helper cell fates by dynamical control of IRF4, **Veena Krishnamoorthy**

15. Genetic and environmental strategies for refining mouse models of human *Chlamydia* infection, **Jasmine Labuda**

16. Malaria parasite infection dampens the immune response to *Salmonella* Typhimurium: a role for macrophage polarization, **Annica Stull-Lane**

17. Discovery of altered peptide ligands of a natural *Salmonella* MHC Class II epitope, **Bokyung Lee**
18. Identification of Antibody-dependent Memory-like NK cells in Non-human Primates, *Jaewon Lee*

19. Sustained calcium influx is associated with enhanced functional activity of human memory-like NK cells, *Tae Hyung Lee*

20. Vitamin A deficiency promotes systemic non-typhoidal *Salmonella* infection by modulating neutrophil function, *Kristen Lokken*

21. Targeting CCR5+ cells for HIV reservoir elimination, *David Merriam*

22. *Salmonella* Typhimurium consumes GABA in the inflamed mouse gut, *Brittany Miller*

23. Identifying the contribution of amoebic trogocytosis to pathogenesis and immune modulation, *Hannah Miller*

24. An Engineered gut system to investigate the effect of changes in dietary composition in the gut microbiome and its function, *Jessica Mizzi*

25. Mechanism of *Salmonella enterica* serovar Typhimurium 14028S invasion and persistence in lettuce, *Jeanine Montano*

26. Exploring the host targets of Mpr1, a fungal metalloprotease that facilitates the transmigration of *Cryptococcus neoformans* across the blood-brain barrier, *Sarisa Na Pomberja*

27. Characterizing RhCMV-based SIV vaccine response in terms of intestinal gene expression in rhesus macaques, *Nicole Narayan*


29. Species-specific Inhibition of the Antiviral Protein Kinase PKR by Capripoxviruses, *Chorong Park*

30. Non-cognate stimulation of CD4 T cells by IL-18 and TL1a contributes to the resolution of intracellular bacterial infections, *Oanh Pham*

31. Preventing post-antibiotic expansion and transmission of carbapenemase-producing *Enterobacteriaceae*, *Erin Olsan*

32. Characterization of Horizontal Gene Transfer events between Hosts and Poxviruses, *M. Julhasur Rahman*

33. Uncovering the true phenotype of pathogen-reactive innate-like B cells, *Hannah Savage*

34. Modulation of dendritic cell development and function by human milk oligosaccharides, *Michiko Shimoda*

35. The Transmissions of Milk-oriented Microbes Via the Built Environment: Infants and Mothers as Sources, *Melanie Shojinaga*

36. Role of B cell-expressed IRF4 in shaping T helper cell fate decisions, *Evelyn Sievert*


38. The fatty acid composition of human milk is associated with infant microbial community profile, *Diana Hazard Taft*
39. Whole genome analysis of Clavibacter michiganensis subsp. michiganensis strains provides insights into genetic diversity and virulence, **Shree Prasad Thapa**

40. Antibiotic treatment reduces PPARγ signaling and regulatory T cell numbers to drive post-antibiotic pathogen expansion, **Connor Tiffany**

41. Mutually Assured Transmission: Dynamics of Co-infection with HIV and Malaria, **Brandi Torrevillas**

42. Purinergic signaling and class switching during Borrelia burgdorferi infection, **Karen Tracy**

43. Induction of the unfolded protein response by *Brucella abortus* VceC, **Jun Yuh (April) Tsai**

44. Characterization of the Resistance of Syrian Hamster PKR to Viral dsRNA-binding PKR inhibitors, **Sameera Vipat**

45. Molecular mechanism of flucytosine resistance in two isolates of C. neoformans gattii, **Kiem Vu**

46. Malaria reduces colonization resistance to non-typhoidal *Salmonella* through alterations to the intestinal microbiota, **Gregory Walker**

47. Different Mechanisms of Complement Evasion by the Typhoidal serovars of *Salmonella*, **Tamding Wangdi** (do not include in poster award competition)

48. Subclinical viral infections accentuate changes in microbiome and immune response in outdoor but not in the built indoor environment, **Mariana Guedes Weber**

49. Differential PKR Inhibition by Poxvirus Proteins Modifies NF-kB and ATF4 Signaling, **Huibin Yu**

50. Modification of LPS by EptB Inhibits Intelectin Binding and Increases Systemic Inflammation During *Salmonella* Infection, **Lillian Zhang**