

32nd Annual Gail Cassell Microbiology Research Retreat

Friday, Oct. 16, 2026

TIME	PROGRAM	LAB
2:00–3:30 p.m.	Retreat Registration & Poster Set-Up	
3:30 p.m.	Welcome J. Victor Garcia, Ph.D.	
3:40 p.m.	Introductory Remarks Pete Burrows, Ph.D.	
All presentations will be in the Camellia Room		
3:45 p.m.	Pragun Acharya, B.E. / <i>Graduate Student</i> Epithelial MHC-II Drives Colonic CD4+ Tissue-Resident Memory T Cell Retention and Maintenance	Weaver
4:00 p.m.	Kevin Maroney, M.S. / <i>Graduate Student</i> Functional features of HLA-E restricted CD8 T cell responses associated with spontaneous resolution of Chlamydia trachomatis infection	Goepfert
4:15 p.m.	Yassin Mreyoud, M.S. / <i>Graduate Student</i> Characterizing the Immune Profile of Neo-BLT Humanized Mice Through Single-Cell RNA Sequencing	Garcia-Martinez/ Wahl
4:30 p.m.	Candace Barnes, M.S. / <i>Graduate Student</i> HLA-E-Restricted HIV-Specific TCR-Transduced CD8+ T Cells Persist in HIV-Infected Humanized Mice	Garcia-Martinez/ Wahl
4:45 p.m.	Brooke Bengert, B.S. / <i>Graduate Student</i> Homotypic and heterotypic interactions of astrovirus transmembrane proteins coordinate replication organelle formation	Lenemann
5:00 p.m.	Room Check-In	
5:00–7:00 p.m.	Poster Session *See last page of agenda for poster information*	
5:00–7:00 p.m.	Open Bar	
7:00–8:30 p.m.	Dinner	

Saturday, Oct. 17, 2026

TIME	PROGRAM	LAB
7:00–8:30 a.m.	Breakfast	
8:30 a.m.	Charlie West, B.S. / <i>Graduate Student</i> Δ9-THC Exposure Reduces Viremia and Preserves Peripheral CD4+ Levels During Acute HIV Infection	Garcia-Martinez/ Wahl
8:45 a.m.	Rania Smeltz, B.S. / <i>Graduate Student</i> Long-Acting Cabotegravir and Rifabutin Co-administration Provides Sustained Drug Exposure and Protects Against Mycobacterium tuberculosis Infection	Garcia-Martinez/ Wahl
9:00 a.m.	Darren Ty, M.S. / <i>Graduate Student</i> Robust immune activation induced by BCG inoculation is insufficient to reverse HIV latency despite CD8+ T cell depletion	Garcia-Martinez/ Wahl
9:15 a.m.	Sarah Perritt, M.S. / <i>Graduate Student</i> Convergent ER Stress Responses Identify Drivers of Secondary Bacterial Infection	Harrod
9:30 a.m.	Kendall Shaffer, B.S. / <i>Graduate Student</i> Staphylococcus aureus alters the lung metabolome to promote coinfection with Pseudomonas aeruginosa via homoserine in the cystic fibrosis rat	Birket
9:45 a.m.	Kyle Landers, B.S. / <i>Graduate Student</i> Airway epithelial derived Lactoferrin is significantly decreased during IAV infection	Harrod
10:00 a.m.	Jessie Fields, B.S. / <i>Graduate Student</i> Airway epithelial derived Lactoferrin is significantly decreased during IAV infection	Wang

Agenda

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TIME	PROGRAM	LAB
10:15 a.m.	Federico Prokopczuk, B.S. / Graduate Student Temperate bacteriophages shape intraspecies competition during <i>Pseudomonas aeruginosa</i> Infection	Orihuela
10:30 a.m.	Break	
10:45 a.m.	Vanessa Radilla-Garcia, B.S. / Graduate Student What does it take to be a three? Metabolic Requirements for <i>Streptococcus pneumoniae</i> Serotype 3	Orihuela
11:00 a.m.	Christopher Hamm, Ph.D. / Postdoctoral Fellow The roles and synthesis of inorganic polyphosphate in <i>Bacillus cereus</i>	Gray
11:15 a.m.	Joshua Huffines, Ph.D. / Postdoctoral Fellow Revisiting the Physiological Impact of Lactoperoxidase on Oral Streptococci	Gray
11:30 a.m.	Muhammad Shahid Riaz, Ph.D. / Postdoctoral Fellow Bad Bugs, Fatty Microglia: How <i>P. gingivalis</i> Hijacks Brain Immunity	Ping
11:45 a.m.	Silvia Santana, Ph.D. / Postdoctoral Fellow Exploring Mechanisms of Cardiac Damage Following <i>Streptococcus pneumoniae</i> Infection	Orihuela
12:00 p.m.	Break	
12:15 p.m.	Group Photo	
12:45 p.m.	Lunch - Sandwiches can be taken to go	
1:30–6:00 p.m.	Free Time - See park website for activities	
6:00–6:30 p.m.	Social Hour	
6:30 p.m.	Dinner	
Distinguished Alumnus Speaker		
7:00 p.m.	Program Introduction J. Victor Garcia, Ph.D. Speaker Introduction Harry W. Schroeder, Jr., M.D., Ph.D. Ivalyo Ivanov, Ph.D. , Professor of Microbiology and Immunology, Columbia University	
8:00 p.m.	Live Music The Payline ; Open Bar	

Sunday, Oct. 18, 2026

TIME	PROGRAM
7:30–8:30 a.m.	Breakfast
Faculty Presentations	
8:30 a.m.	Tariq Najar, Ph.D. Gut Instinct: Commensal-Driven T Cell Plasticity as a New Lever for Cancer Immunotherapy
9:00 a.m.	Hui Hu, M.D., Ph.D. From follicular helper CD4+ T cells (Tfh) to progenitor exhausted CD8+ T cells (Tpex)–Some conceptual challenges
9:30 a.m.	Terje Dokland, Ph.D. Exploitation of helper phages by <i>Staphylococcus aureus</i> pathogenicity islands
10:00 a.m.	Awards Pete Burrows, Ph.D.
10:30 a.m.	Closing Remarks J. Victor Garcia, Ph.D.
10:45–11:00 a.m.	Check-Out

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Poster Presentations

#	NAME	GROUP	LAB	ABSTRACT TITLE
1	Manse Kim, Ph.D.	Instructor	Garcia-Martinez /Wahl	Two Drugs, One Injection, More Than Two Months Above the MIC: Advancing Long-Acting Combination Therapy for Tuberculosis
2	Erica Acox, B.S.	Graduate Student	Scofield	Exploring the Role of Thioproline on Streptococcus mutans Biofilm Development and Glucosyltransferase Activity
3	Courtney Barkley, B.S.	Graduate Student	Harrod	Micellar Delivery Overcomes Pharmacokinetic Limitations of Tocopherol-Based SARS-CoV-2 Antivirals
4	Molly Cavanaugh, B.S.	Graduate Student	Garcia-Martinez /Wahl	ART Suppresses HIV in the CNS of Humanized Mice
5	Kieran Gonda, B.S. They/Them/Theirs	Graduate Student	Zheng	Purification and Structural Determination of Bacillus subtilis Small Mechanosensitive Channel ykuT
6	Julia Hochstetler, B.S.	Graduate Student	Scofield	Ivacaftor potentiates Pseudomonas aeruginosa-commensal biofilm development
7	Blaine Johnston, B.S.	Graduate Student	Lund	Epigenetic Remodeling by EZH2 Contributes to Secondary Antibody Secreting Cell Differentiation
8	Cuong (Lucas) Lam, B.S., M.S.	Graduate Student	Leal	The Role of Lytic Programmed Cell Death and Essential Metals in Post-Viral Secondary Mold Infection
9	Ousley Langworthy, M.S.	Graduate Student	Zajac	Downregulation of ST6Gal-1 Mediated Sialylation Promotes CD8+ T Cell Effector Differentiation
10	Yash Shah, M.S.	Graduate Student	Dutt	Passive Transfer of Vaccinated-Induced Antibodies to Define Antibody-Mediated Protection Against Mycobacterium tuberculosis
11	Ashley Wood, M.S.	Graduate Student	Mollaoglu	Targeting the tumor immune microenvironment for enhanced CART treatment in solid tumors
12	Krishna Chinta, Ph.D.	Postdoctoral Fellow	Steyn	Glucose drives a rapid oxidative burst and immunometabolic reprogramming in human neutrophils during Mycobacterium tuberculosis infection
13	Prattay Dey, Ph.D.	Postdoctoral Fellow	Orihuela	Characterization of a GPSC10 Pneumococcal Strain of Streptococcus pneumoniae for Studying Neurological Disease and Protective Immunization
14	Camila Gonzalez-Arancibia, Ph.D.	Postdoctoral Fellow	Carter	Feedforward Regulation between the Microbiome and Psychostimulant Abuse
15	Masaya Hirayama, Ph.D.	Postdoctoral Fellow	Novak	Galactose-Deficient IgA1-Containing Immune Complexes from Sera of Patients with IgA Nephropathy, but not the Individual Protein Components, Induce Cytokine/Chemokine Production in Cultured Primary Human Mesangial Cells
16	Nehaal Akavaram, M.S.	Staff	Dokland	Mechanism of binding and cleavage of 50S ribosomal protein bL27 by Prp
17	Francisco Dominguez, Ph.D. & Douglas Fox, Ph.D.	Staff	Leal/SEBLAB	The Southeastern Biosafety Laboratory Alabama Birmingham (SEBLAB): A top tier biocontainment research facility to advance your BSL-3 and ABSL-3 research program
18	Sajid Nadeem, Ph.D.	Staff	Steyn	Tuberculosis lesions exhibit distinct biometal distribution patterns across diverse histopathological zones
19	Ritesh Sevalkar, Ph.D.	Staff	Steyn	Hydrogen sulfide oxidation in tuberculosis: Roles of Mtb and host sulfide:quinone oxidoreductase (SQR)
20	Qing Wei, M.D., Ph.D.	Staff	Novak	Cell-specific glycosylation of HIV-1 envelope glycoprotein impacts virus infectivity and recognition by broadly neutralizing antibodies