

## PacTB 2024

May 6, 1:00 – 5:35pm & May 7, 9:00am – 3:00pm

Seattle Children's Building Cure, McKinstry Auditorium, [1920 Terry Ave, Seattle, WA 98101](https://www.seattlechildrens.org/locations/1920-Terry-Ave)

Monday, May 6			
<b>Check In</b>		1:00pm	2:00pm
<b>Welcoming Remarks – Christoph Grundner</b>		2:00pm	2:15pm
<i>Session 1 – Austin Haynes, PhD Candidate</i>			
Cassie Winter UW	T cells specific for mycobacterial lipids undergo antigen-independent activation and express anti-bacterial effector functions	2:15pm	2:35pm
Weihao Zheng PhD UCSF	A monocyte-derived lung cell subset that harbors M. tuberculosis is hyporesponsive to IFN $\gamma$	2:35pm	2:55pm
Virginia Pichler UBC	Unveiling the diversity of clinical <i>Mycobacterium abscessus</i> infections: morphological spectrum, glycopeptidolipids and infection dynamics in macrophages.	2:55pm	3:15pm
<b>Break</b>		3:15pm	3:35pm
<i>Session 2 – Kristine Tandoc, Graduate Research Assistant</i>			
Kim Foster UW	CD4 T cell-induced IDO-1 in non-hematopoietic cells shapes granuloma formation in the setting of pre-existing immunity to Mycobacterium tuberculosis	3:35pm	3:55pm
Nafsika Panagiotopoulou SSI	Opening a backdoor to the tuberculosis granuloma by vaccine-promoted High Endothelial Venules	3:55pm	4:15pm
Talia Himmelfarb MD UW	Maternal mycobacterial-specific T-cell signatures and infant immune outcomes	4:15pm	4:35pm
<b>Poster session</b>		4:35pm	5:35pm
<b>Dinner</b>	<a href="https://www.seattlechildrens.org/locations/Bowlero-Garage">Bowlero Garage, 1130 Broadway, Seattle, 98122</a>	6:00pm	8:00pm
Tuesday, May 7			
<b>Breakfast</b>		9:00am	9:30am
<i>Session 3 – Anthony Reynolds, PhD Candidate</i>			
Yichu Liang U of Ottawa	Inhibition of PPM1A for host-directed tuberculosis therapy	9:30am	9:50am
Christine Qabar UC Berkeley	Leveraging a synthetic biology approach to enhance BCG-mediated expansion of V $\gamma$ 9V $\delta$ 2 T-cells	9:50am	10:10am
Molly Kanagy UW	CXCR2 Inhibition limits Neutrophil-Driven Tissue Destruction and Decreases Bacterial Burdens	10:10am	10:30am
<b>Break</b>		10:30am	10:50am
<i>Session 4 – Braden Carroll, Graduate Research Assistant</i>			
Marian Fairgrieve UC Berkeley	Factors determining the failure of innate immunity to control M. tuberculosis	10:50am	11:10am
Allison Tammen OHSU	Two-pore channel endosomal calcium signaling enables MR1 presentation of Mycobacterium tuberculosis	11:10am	11:30am
Isabel Lamb-Echegaray UC Berkeley	Elucidating the mechanism and correlates of protection elicited by CDN adjuvanted vaccines for M. tuberculosis.	11:30am	11:50am
<b>Lunch</b>		11:50am	12:50pm
<i>Session 5 – Elya Shamskhov, PhD Candidate</i>			
Antonio Pagán PhD Stanford	“Non-canonical” roles of autophagy-related proteins in anti-mycobacterial immunity	12:50pm	1:10pm
Vishant Boradia PhD UW	Unraveling the role of PE/PPE proteins in tuberculosis drug resistance	1:10pm	1:30pm
Mario Arrieta-Ortiz PhD ISB	Monocyte transcriptome remodeling sheds light into molecular signatures of pulmonary tuberculosis	1:30pm	1:50pm
<b>Closing Remarks – Christoph Grundner</b>		1:50pm	2:00pm
<b>Poster session</b>		2:00pm	3:00pm

Posters	
1. Abdelaal, Hazem UW	Synergy of Bedaquiline and Capreomycin Against Tuberculosis: In Vitro and In Vivo Efficacy Across Mycobacterium tuberculosis Lineages
2. Agudelo, Carolina UC Berkeley	The Role of the Host Gut Microbiome in Susceptibility to Mycobacterium tuberculosis
3. Aguila, Laarni Kendra UW	Targeted disruptions in bacterial proton motive force promote antibiotic tolerance
4. Ames, Lauren SCRI	Biological profiling of novel MmpL3 inhibitors against <i>Mycobacterium tuberculosis</i>
5. Anaya-Sanchez, Andrea UC Berkeley	Role of methylglyoxal detoxification in the virulence of intracellular pathogens
6. Barrett, Holly UW	CD4 and CD8 T cells mediate distinct aspects of vaccine-induced immunity against Mycobacterium tuberculosis infection in ultra-low dose infected mice
7. Beatty, Kimberly OHSU	Analysis of $\beta$ -lactam drug targets in Mycobacterium tuberculosis
8. Bhagwat, Amala SCRI	2-Aminothiazoles are bactericidal against Mycobacterium tuberculosis by inhibiting enolase in a copper-dependent fashion
9. Bishop, Emma and Church, E. Chandler UW	Probing dermal immunity to mycobacteria through a controlled human infection model
10. Butts, Arielle SCRI	Identification and characterization of compounds with activity against intracellular M. tuberculosis
11. Carroll, Braden SCRI	Using kinome regression to identify novel host pathways that impact <i>Myobacterim tuberculosis</i> infection outcome
12. Chao, Joseph UBC	A Shiny Approach to High Content Screening Data Analysis
13. Christofferson, Matt UBC	Host-directed therapies (HDT) aim to aid the host in controlling pathogens by targeting innate immunity pathways
14. Coldren, Miranda SCRI	Investigating kinase regulation of Mycobacterium tuberculosis respiration and its impact on survival
15. DeRocher, Amy SCRI	Structure of GlyRS from M. tuberculosis
16. Deshpande, Aditi SCRI	Investigation of respiration inhibitors in Mycobacterium tuberculosis
17. Dinshaw, Kayla UC Berkeley	Random barcode transposon-site sequencing in Mycobacterium tuberculosis to reveal functions of unknown genes
18. Duffy, Fergal SCRI	Single-cell profiling of mouse lungs during Mtb infection reveals cell types correlated with disease progression and protection
19. Fattinger Stefan UC Berkeley	Type I and II IFN crosstalk during Mycobacterium tuberculosis infection
20. Felker, Jake UBC	Investigating the function of MX GTPases during Mycobacterium tuberculosis infection
21. Haynes, Austin UW	Targeted MTB ESX-5 Deletions Alter Macrophage Cytokine Profiles
22. Imanpour, Asana UBC	Rv1747, an ABC transporter in Mycobacterium tuberculosis (Mtb), is pivotal for the uptake and export of molecules critical to bacterial virulence
23. Ivie, Joshua UW	Macrophage GWAS: A Platform to Discover Human Genetic Determinants of TB Pathogenesis
24. Kain, Dylan OHSU	BCG Vaccination at Birth Shapes the TCR Usage and Functional Profile of Human MR1T Cells at 9 Weeks
25. Kieswetter, Nathan UW	Degree of acylation of M. tuberculosis cell wall glycolipids modulates anti-lipid antibodies in TB/HIV co-infected patients
26. Kim, Joyce (Se-Jin) OHSU	The novel role of calcium-sensing synaptotagmins in MR1 antigen presentation of <i>Mycobacterium tuberculosis</i>
27. Kleetz, Julia UBC	Oxazolone biosynthesis in <i>M. tuberculosis</i> – the surprising truth about MoeW
28. Kotov, Dmitri UC Berkeley	Interleukin-1 receptor antagonist is a conserved driver of tuberculosis

29. Kulicke, Corinna OHSU	Mutations outside the MR1 ligand binding groove differentially inhibit presentation of exogenous antigens through modulating binding to $\beta_2$ -microglobulin
30. Lamb-Echegaray, Isabel UC Berkeley	Elucidating the mechanism and correlates of protection elicited by CDN adjuvanted vaccines for <i>M. tuberculosis</i>
31. Larsen, Sasha SCRI	Evaluation of Host Immune Responses to Mycobacteriophage Fionnbharth by Route of Delivery
32. Lee, Jae-Jin; Lee Giyong; Hyungjin Eoh USC	Targeting Mycobacterium tuberculosis persistence through inhibition of the trehalose catalytic shift
33. Liu, Dong SCRI	APOE Protects Against Severe Infection with Mycobacterium tuberculosis by Restraining Production of Neutrophil Extracellular Traps
34. Maciag, Karolina UW	IFN $\gamma$ -dependent and independent T cell properties; an effective vaccine strategy against TB disease while minimizing immunopathology
35. Maerz, Megan UW	$\gamma\delta$ T cells promote cytotoxic and pro-inflammatory functional profiles in the blood and lung after intravenous BCG vaccination
36. Makatsa, Mohau UW	Intravenous BCG immunization induces highly cytotoxic Natural Killer cells in broncho alveolar lavage of rhesus macaques
37. McCall, Rita UC Berkely	Proximity labeling of the perforated phagosome during Mycobacterium tuberculosis infection
38. Mushtaq, Aisha UW	Trojan horse: exploiting the trehalose transporter pathway to deliver antibiotics into mycobacteria
39. Nguyenla, Xammy OHSU	Nanobody IHC/IF reveals localization of <i>M.tb</i> virulence factors within granulomas
40. Nilsson, Hannah UC Berkeley	An unprecedented regulatory mechanism that controls Mav colony morphology switching, antibiotic resistance and virulence
41. Plumlee, Courtney SCRI	Assessing Vaccine-Mediated Protection in an Ultra-Low Dose Mycobacterium tuberculosis Murine Model
42. Rae, Christopher UC Berkeley	Tiny but mighty; MmpL4, a small molecule exporter present across all mycobacterial species and essential for the virulence of <i>M. tuberculosis</i>
43. Rane, Divya UW	Describing the Spatial Proteomics of Leprosy Granulomas using Imaging Mass Cytometry
44. Rankine-Wilson, Leah UBC	An ex-vivo screen against <i>Mycobacterium tuberculosis</i> identifies macrophage vacuolar-ATPase inhibitors as potent broad-spectrum host-directed antimicrobial agents
45. Reynolds, Anthony UW	Determining the Human Macrophage Phosphoproteomic Response to Mtb Infection and Pathogenesis
46. Ringo, Herieth UBC	Identifications of active compounds against <i>Mycobacterium abscessus</i>
47. Saha, Aparajita UW	Diminished TB-specific T cell responses during pregnancy in women with HIV and the effect of isoniazid preventive therapy
48. Shamskhov, Elya UW	Dynamic modulation of the monocytic niche within the mediastinal lymph node promotes Mycobacterium tuberculosis persistence while limiting T cell priming
49. Shaporifar, Shima UW	Identification of a functionally active SNP in the MUC5AC gene that is associated with cerebral spinal fluid cytokine responses and tuberculous meningitis susceptibility and mortality
50. Simmons, Jason UW	Pharmacologic and genetic targeting of host fatty oxidation differentially impacts <i>M. tuberculosis</i> control in human macrophages
51. Tandoc, Kristine UW	Characterizing the role of an atypical phosphodiesterase (Rv1339) in Mycobacterium tuberculosis
52. Tappen, Tori UW	Molecular mechanisms of $\gamma\delta$ T cell receptor recognition of mycobacterial lipids presented by CD1b and CD1c
53. Tieu, Erick UW	Identifying how PknD expression modulates drug response to isoniazid
54. Tripathi, Ashutosh SCRI	Outer membrane transporter function of <i>Mycobacterium tuberculosis</i> PE25/PPE41 proteins
55. Williams, Brittany SCRI	Impact of SARS-CoV-2 and Mycobacterium tuberculosis Co-infection on Disease Progression and Host-Mediated Responses