

Posters

SESSION 1

1. PUJA BAGRI

PhD Student

Investigating the protective role of female sex hormone estradiol against viral infections

3. FELIX CROTEAU

PhD Student

Phages as stabilizers of the gut microbiota

5. ABDULLAH EL-SAYES

Undergraduate

Utilization of natural killer cells and bi-specific antibodies to vanquish malignant tumors via antibody dependent cellular cytotoxicity

7. CARESSA TSAI

PhD Student

A macrophage-based screen identifies antibacterial compounds selective for intracellular *Salmonella* Typhimurium

9. SARAH HORDIENKO

Undergraduate

The role of the type IV secretion system in AIEC pathogenesis

11. HALEY DUPONT

MSc Student

Determining metabolic behaviours of vaginal bacteria for the prevention of HIV

13. ALLISON KENNEDY

Postdoctoral Fellow

Half body low dose radiation therapy in recurrent prostate cancer patients

15. DANNY MA

Undergraduate

Evaluating the effect of age on phagocytosis of *Streptococcus pneumoniae* by macrophages

17. GRACE TESKEY

MSc Student

The peripheral immunophenotype in neurodevelopmental disorders

19. JUDJINA THEVARAJAH

Undergraduate

Age-, sex-, and co-morbidity-related changes in circulating cytokines and evaluating URT microbe-microbe interactions

21. MINA SADEGHI

Undergraduate

Exploring the use of upper respiratory tract commensal bacteria to inhibit the growth of respiratory pathogens in a mouse lung slice model

23. SARA MAKAREMI

PhD Student

Investigating diffusion of receptors on macrophage membranes using single molecule tracking

25. AARON DE JONG

Undergraduate

Defining the genetic requirements for *Klebsiella pneumoniae* serum survival in mammalian bloodstreams

27. BRENT WEBER

Postdoctoral Fellow

Use of human serum as a growth medium to identify novel anti-bacterial compounds against *Klebsiella pneumoniae*

29. JOEFFRE BRAGA

Undergraduate

Investigating the toxicity of drugs targeting the bacterial cytoplasmic membrane in mammalian cells

31. KRISTINA KLOBUCAR

PhD Student

Potentiating Gram-positive antibiotics in *Escherichia coli* using genetic synthetic lethality

33. MADELINE TONG

PhD Student

Understanding gene essentiality patterns in *Escherichia coli* in different carbon environments

35. ALLISON GUITOR

PhD Student

In-solution targeted capture for sequencing of antibiotic resistance genes

37. DREW HANSEN

MSc Student

Inactivating conjugative transposition: An *in vivo* high-throughput screening approach to inhibit the vancomycin resistance transposon Tn1549

39. FLAVIA CORDOS

Undergraduate

Establishing a platform for the capture and expression of new natural products from Actinomycetes

41. HALEY ZUBYK

MSc Student

Investigating the mechanistic enzymology of EdeM, a single-substrate serine transaminase

43. VENKATESWARLU YARLAGADDA

Postdoctoral Fellow

Venturicidin, a natural product inhibitor of ATP synthase potentiates aminoglycosides and complements gentamicin in eradicating MRSA biofilms

45. BRIANNE LAVERTY

Undergraduate

Oligos to detect pathogens causing sepsis and anti-microbial resistance genes

47. BRONWYN BARKER

Undergraduate

Combating antimicrobial resistance in Africa

49. BHAVYA SINGH

MSc Student

The case of the missing bifidobacteria: a mystery within metagenomic profiling of the infant gut microbiome

51. NATHAN BULLEN

MSc Student

Characterization of an effector that is delivered through an interkingdom-targeting type 6 secretion system

53. GREG KORFANTY

MSc Student

Global epidemiology of *Aspergillus fumigatus*: A focus on populations from New Zealand, Saudi Arabia, and China

55. LIJUN LIU

MSc Student

A novel approach of Photo Dynamic Therapy (PDT) against the dominant agent of superficial infection, *Trichophyton rubrum*

57. KATHARINA SCHULZ

Postdoctoral Fellow

Functional analysis of IRF9 post-translational modifications

59. HIVA MESBAHI

MSc Student

Vitamin B12 reduces the roller phenotype in *Caenorhabditis elegans*

61. JESSICA CHEE

Undergraduate

Identifying genes associated with biofilm production in sub-minimum inhibitory concentrations of antibiotics in *Pseudomonas aeruginosa*

63. MONICA WARNER

Undergraduate

Phenotypic characterization of *Pseudomonas aeruginosa* genes co-regulated with *pilA*

65. MATT ZAMBRI

MSc Student

Characterizing *Streptomyces* exploration and understanding its role in the environment

67. HANNAH STACEY

PhD Student

IgA immune complexes stimulate netosis during viral infection and autoimmunity

69. JONATHAN MAPLETOFT

PhD Student

Elucidating the role of senataxin during class switch recombination

71. KIMBERLY BRAZ GOMES

Postdoctoral Fellow

Vaccine-mediated induction of broadly-neutralizing antibodies against influenza A virus in children

POSTER PRESENTATIONS

73. YU FAN (PETER) ZENG

Undergraduate

Senataxin regulates the antiviral transcriptional response during HSV-1 infection

75. PAUL NAPHTALI

PhD Student

Identifying the microbial drivers of cystic fibrosis pulmonary exacerbations using single cell-based assays

77. ALEXANDER BAK

Undergraduate

Surveillance of patient population for multidrug resistant micro-organisms

79. SHAHROKH

SHEKARRIZ

PhD Student

Assembling the bacterial dark matter of the human gut using a novel culture-enriched metagenomics approach

81. PARDIS BALARI

Undergraduate

Mapping the bacterial Ku-DNA interactions in the context of the highly variable C-termini

83. ALEXANDER HUA

Undergraduate

A novel strategy for strain-specific identification of *Clostridium difficile* utilizing DNAszymes

85. ERIN MCCONNELL

Postdoctoral Fellow

Signal amplification of the molecular recognition event of *Legionella pneumophila* by an RNA-cleaving DNAszyme using Rolling Circle Amplification

87. MEGHAN

ROTHENBROKER

MSc Student

Selection and characterization of a DNAszyme for the detection of *Legionella pneumophila*

89. MARYAM

VASEGHI-SHANJANI

MSc Student

Parenteral BCG immunization imprints lung innate immune cells and enhances early anti-tuberculosis immunity in the murine lung

91. JUSTINE JUANA

Undergraduate

Developing a DNA-based fluorescent assay for *Escherichia coli* detection

6. RAFIK EL WERFALLI,

HUI-KI (RACHEL) TRAN,

SALLY MIN, ANATOLY

MIROSHNICHENKO

Undergraduate

The Virulence Ontology (VIRO): Examining the relationship between virulence and antimicrobial resistance via expansion of the Comprehensive Antibiotic Resistance Database (CARD)

8. ELIZABETH CHAU

PhD Student

Intracellular virulence regulator primes bacterial survival against human complement

10. ALLISON FELKER

Postdoctoral Fellow

Investigating the impact of herpes simplex virus type 2 infection on pregnancy outcomes in mice

12. RAMTIN GHASEMI

MSc Student

Examining the role of estradiol on B cell responses against herpes simplex virus type 2 in the female genital tract

14. CHRISTIAN SCHULTZ

Postdoctoral Fellow

How do the microbiome and the age of the host influence the susceptibility to *Streptococcus pneumoniae*?

SESSION 2

2. ANISHA NANDY

MSc Student

Identifying prophage mediated responses to bioactive compounds

4. HIBA SHAREEFDEEN

MSc Student

Following phages in fecal microbiota transplants

POSTER PRESENTATIONS

16. ERICA DE JONG

MSc Student

Identifying and isolating strains from the intestinal microbiome that increase in relative abundance with the ill-effects of aging

18. JESSICA BREZNIK

PhD Student

Inflammatory monocytes correlate with insulin not adiposity in obese male mice

20. MELODIE KIM

Undergraduate

Bacillus amyloliquefaciens induces cathelicidin expression and inhibits the growth of *Escherichia coli*

22. MOHAMMAD MALIK

Research Staff

Examining correlates of inflammation in the blood and the nose of community dwelling adults

24. CEDOLJUB

BUNDALOVIC-TORMA

Postdoctoral Fellow

Mining the upper respiratory tract microbiome for probiotics with protective benefits against age-related infection and robust immune responses

26. ALIA KHALED

Undergraduate

Identifying the essentiality of sRNAs in *Salmonella enterica* serovar Typhimurium during a *Galleria mellonella* infection

28. CRAIG MACNAIR

PhD Student

Overcoming *mcr-1* mediated colistin resistance with colistin in combination with other antibiotics

30. KENNETH RACHWALSKI

MSc Student

A chemical genomics approach to uncovering novel sRNA phenotypes by construction of a sRNA double knockout collection

32. LINDSEY CARFRAE

PhD Student

Validating biotin biosynthesis as a broad-spectrum antibiotic target

34. SARA EL ZAHED

PhD Student

Defining the chemical rules for efflux by the AcrABEF-TolC system in *Escherichia coli*

36. CAITLYN ROTONDO

PhD Student

Insights into the mechanism of action of aspergillomarasmine A

38. EMILY BORDELEAU

PhD Student

A genomic enzymology study of the apramycin-resistance enzyme ApmA

40. GRACE YIM

Postdoctoral Fellow

Tri-chlorination of a teicoplanin type glycopeptide antibiotic by the halogenase Stal evades resistance

42. MATTHEW SURETTE

PhD Student

An unknown regulatory system controls intrinsic rifamycin resistance in Actinobacteria

44. VISHWAS RAO

Undergraduate

Developing novel antibiotics to treat multidrug-resistant *Neisseria gonorrhoeae*

46. ZACHERY DICKSON

MSc Student

Hierarchical oligonucleotide design for identifying sepsis pathogens

48. AMAN PATEL

Undergraduate

Exploring bacterial cross-feeding interactions within the infant gut

50. LUCAS FLETT

MSc Student

Building a turbidostat to analyze gut microbiota succession in infants

52. ADRIAN FORSYTHE

PhD Student

Developing a probiotic approach to reduce severity of white-nose syndrome in bats

POSTER PRESENTATIONS

54. HIMESHI SAMARASINGHE

PhD Student

Sexual reproduction reveals hidden genetic diversity associated with virulence factors in the fungal pathogen *Cryptococcus neoformans*

56. ALYSSA VITO

PhD Student

A combination of oncolytic HSV and clinical chemotherapies render TNBC susceptible to checkpoint blockade

58. NADER EL SAYES

Postdoctoral Fellow

Targeting tumor heterogeneity with oncolytic HSV-1

60. KIM PHO

MSc Student

Impact of the human microbiota on Alzheimer's disease using *Caenorhabditis elegans* as a model

62. LUKE YAEGER

MSc Student

Unravelling the *Pseudomonas aeruginosa* response to sub-MIC antibiotics

64. EMMA MULHOLLAND

MSc Student

Ribonuclease interacting partners and behaviour in *Streptomyces venezuelae*

66. XIAFEI ZHANG

PhD Student

Genetic control of antibiotic production in *Streptomyces* bacteria

68. HANU CHAUDHARI

Undergraduate

Co-operation between an antiviral drug and the adaptive immune response to influenza virus

70. JULIA AVOLIO

Undergraduate

Determining the role of infection-mediated stimulation of human endogenous retrovirus K in the pathogenesis of amyotrophic lateral sclerosis

72. SIERRA BARNES

Undergraduate

Investigation of the cooperative functions of polyclonal antibodies against influenza virus

74. GAYATRI NAIR

MSc Student

Distinguishing active bacterial populations causing clinical exacerbations in cystic fibrosis patients via DNA and RNA based molecular profiling

76. ZAIN CHEEMA

Undergraduate

Isolation and characterization of *Faecalibacterium prausnitzii*

78. KUGANYA

NIRMALARAJAH

Undergraduate

Antagonistic interactions between commensal organisms of the upper respiratory tract microbiota and airway pathogens methicillin resistant *Staphylococcus aureus* and *Streptococcus pneumoniae*

80. KIM CHAU

Postdoctoral Fellow

The ProbGut study: Probiotics on the gut microbiota of healthy children

82. ZARWA SAQIB

MSc Student

Fecal β -defensin levels as a reliable biomarker of intestinal dysbiosis

84. DEVON MORRISON

MSc Student

Microbial dysbiosis in the colon used as a tool for early colorectal cancer detection

86. JIUXING LI

Postdoctoral Fellow

Facile synthesis of uniform iridium nanoplates to enhance antibacterial activity of silver nanoparticles

88. SAHAR ESMAEILI

SAMANI

MSc Student

Development of a simple bead-based assay for the detection of *Escherichia coli* by DNAzymes

90. MICHAEL D'AGOSTINO

MSc Student

Mucosal imprinting of innate immunity following respiratory mucosal vaccination protects against early *Mycobacterium tuberculosis* infection independent of T cells