

Virtual Streptococcal Trainee Symposium

*Indicates this trainee is on/will soon be on the job market

All times represent Eastern Daylight Time (EDT)

TUESDAY, September 8th, 2020

6.00pm - 6.45pm

Streptococcal Genetics and Physiology

Discussion Leader: ***Tanya Puccio** (Virginia Commonwealth University)

6.00pm - 6.15pm

***Luke Joyce** (Dr. Kelli Palmer, The University of Texas at Dallas)

“Phosphatidylcholine biosynthesis in Mitis group streptococci via host metabolite scavenging”

6.15pm - 6.30pm

Dr. Christina Morra (Dr. Carlos Orihuela, University of Alabama at Birmingham)

“Total and relative sugar concentrations effect the growth, viability and pyruvate metabolism of *Streptococcus pneumoniae*”

6.30pm - 6.45pm

***Dr. Anushila Chatterjee** (Dr. Breck Duerkop, University of Colorado-Anschutz)

“Murder among the masses: indirect phage-mediated antibacterial antagonism”

6.45pm - 6.50pm

Break

6.50pm - 7.20pm

Flash talks

Discussion Leader: ***Dr. Anushila Chatterjee** (University of Colorado-Anschutz)

6.50pm - 6.55pm

Irina Laczkovich (Dr. Michael Federle, University of Illinois at Chicago)

“Ribosome profiling as a screening method to identify signaling peptides in *Streptococcus pneumoniae* D39”

6.55pm - 7.00pm

Magnus G. Jespersen (Dr. Mark Davies, University of Melbourne)

“Benchmarking pangenome tools: The Do’s and Don’ts of current approaches”

7.00pm - 7.05pm

Eriel Martinez (Dr. Carlos Orihuela, University of Alabama at Birmingham)

“Capsule promotes vascular endothelium crossing of pneumococci during invasive disease”

7.05pm - 7.10pm

Alyssa Brokaw (Dr. Lakshmi Rajagopal, University of Washington)

“Evaluation of alpha-like proteins during pregnancy-associated Group B Streptococcal infection”

7.10pm - 7.15pm

Katherine Kruckow (Dr. Carlos Orihuela, University of Alabama at Birmingham)

“Understanding alterations in aging macrophages that contribute to increased susceptibility to pneumococcal disease”

7.15pm - 7.20pm

Alexandra Peterson (Dr. Jose Lemos, University of Florida)

“Identification and Characterization of a Zinc Import System in *Streptococcus mutans*”

7.20pm - 7.25pm

Dr. Feroze Ganaie (Dr. Moon Nahm, University of Alabama at Birmingham)

“Discovery of a novel and 100th pneumococcal capsule type, 10D, which has a large *cps* fragment from an oral streptococcus”

7.25pm - 7.30pm

Break

7.30pm - 8.30pm

Host-Streptococcal Interactions

Discussion Leader: **Dr. Ninecia Scott** (University of Alabama at Birmingham)

7.30pm - 7.45pm

Dr. Manmeet Bhalla (Dr. Elsa Bou Ghanem, University at Buffalo)

“A1 adenosine receptor signaling reverses the age-driven impairment in PMN anti-pneumococcal function”

7.45pm - 8.00pm

***Rezia Era D. Braza** (Dr. Kevin McIver, University of Maryland, College Park)

“PTS Uptake and Metabolism of the β -Glucoside Salicin Impacts Group A Streptococcal Bloodstream Survival and Soft Tissue Infection”

8.00pm - 8.15pm

Dr. Sam Manna (Dr. Catherine Satzke, Murdoch Children's Research Institute)

“Synergism and antagonism of bacterial-viral co-infection in the upper respiratory tract”

8.15pm - 8.30pm

Dr. Rebecca A. Keogh (Dr. Kelly Doran, University of Colorado-Anschutz)

“Global annotation of sRNA in Group B *Streptococcus* leads to the identification of the first sRNA regulator of vaginal invasion”

WEDNESDAY, September 9th, 2020

2.00pm - 2.45pm

Streptococcal Genetics and Physiology

Discussion Leader: ***Dr. Michael Connor** (Institut Pasteur)

2.00pm - 2.15pm

***Dimitra Synefiaridou** (Dr. Jan-Willem Veening, University of Lausanne)

“Harnessing CRISPR-Cas9 for genome editing in *Streptococcus pneumoniae*”

2.15pm - 2.30pm

***Tanya Puccio** (Dr. Todd Kitten, Virginia Commonwealth University)

“Manganese depletion leads to multi-system changes in the transcriptome of the opportunistic pathogen *Streptococcus sanguinis*”

2.30pm - 2.45pm

***Kaitlyn Tylor** (Dr. Michael Federle, University of Illinois at Chicago)

“Elucidating molecular mechanisms governing Rgg-SHP transcription regulation during quorum sensing in Streptococci”

2.45pm - 2.50pm

Break

2.50pm - 3.25pm

Flash talks

Discussion Leader: ***Luke Joyce** (The University of Texas at Dallas)

2.50pm - 2.55pm

Dr. Hansol Im (Dr. Carlos Orihuela, University of Alabama at Birmingham)

“Anatomical-site specific carbohydrate shapes *Streptococcus pneumoniae* virulence”

2.55pm - 3.00pm

Anna Furuta (Dr. Lakshmi Rajagopal, University of Washington)

“Assessing the antibody response to a synthetic non-toxic analog of GBS pigment”

3.00pm - 3.05pm

***Dr. Nicole Pershing** (Dr. Anne Blaschke, University of Utah)

“The capsule and beyond: genetic determinants of pediatric *Streptococcus pneumoniae* empyema”

3.05pm - 3.10pm

Norhan Alhajjar (Dr. Kelly Doran, University of Colorado-Anschutz)

“Genome-wide mutagenesis identifies factors involved in *Enterococcus faecalis* vaginal adherence and persistence”

- 3.10pm - 3.15pm **Samuel Dedert** (Dr. Edward Swords, University of Alabama at Birmingham)
“Phase-locked strains of *Streptococcus pneumoniae* have altered ability to persist in different host sites”
- 3.15pm - 3.20pm **Jéssica Mendonça** (Dr. Prescilla Nagao, Rio de Janeiro State University)
“Increased susceptibility of *Streptococcus agalactiae* to develop pulmonary infections and endocarditis in diabetic mice”
- 3.20pm - 3.25pm **Dr. Ninecia Scott** (Dr. Carlos Orihuela, University of Alabama at Birmingham)
“High-jacking the wheel to death: Modulation of lung epithelial cell death by *Streptococcus pneumoniae* pneumolysin and hydrogen peroxide”
- 3.25pm - 3.30pm Break

3.30pm - 4.30pm **Host-Streptococcal Interactions**
Discussion Leader: ***Caroline Werlang** (Massachusetts Institute of Technology)

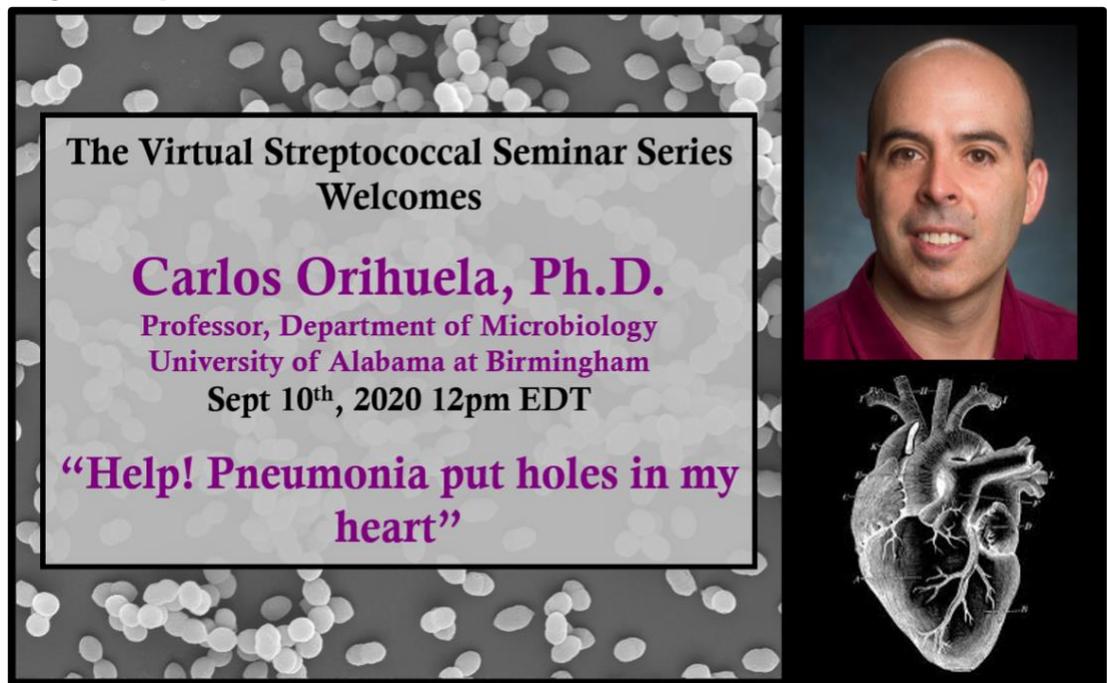
- 3.30pm - 3.45pm ***Dr. Michael Connor** (Dr. Mélanie Hamon, Institut Pasteur)
“The histone demethylase KDM6B fine-tunes the host response to *Streptococcus pneumoniae*”
- 3.45pm - 4.00pm **Thomas Roodsant** (Dr. Constance Schultsz, Amsterdam UMC)
“Zoonotic *Streptococcus suis* translocates transcellularly across a human organoid derived small intestine epithelial monolayer”
- 4.00pm - 4.15pm **Vicki Mercado** (Dr. Kathryn Patras, Baylor College of Medicine)
“Exploring how gestational diabetes alters GBS virulence and the anti-GBS host immune response”
- 4.15pm – 4.30pm ***Adonis D'Mello** (Dr. Hervé Tettelin, Institute for Genome Sciences, University of Maryland)
“An *in vivo* atlas of host-pathogen transcriptomes during *Streptococcus pneumoniae* colonization and disease”

THURSDAY, September 10th, 2020

11.00am - 12.00pm **Host-Streptococcal Interactions**
Discussion Leader: **Dr. Christina Morra** (University of Alabama at Birmingham)

- 11.00am - 11.15am ***Dr. Anjali Anil** (Dr. Anirban Banerjee, Indian Institute of Technology Bombay)
“Pyruvate Oxidase: A key determinant of pneumococcal intracellular survival”
- 11.15am - 11.30am ***Caroline Werlang** (Dr. Katharina Ribbeck, Massachusetts Institute of Technology)
“Mucin glycans suppress quorum sensing and genetic transformation in *Streptococcus mutans*”
- 11.30am - 11.45am **Lamar Thomas** (Dr. Laura Cook, Binghamton University: SUNY)
“The characterization of a novel protein, Sak_1753, in vaginal colonization by GBS”
- 11.45am - 11.55am ***Chiara Crestani** (Dr. Ruth Zadoks, University of Glasgow and University of Sydney, respectively)
“The fall and rise of group B *Streptococcus* in dairy cattle: suspected reintroduction from a human reservoir”
- 11.55am - 12.00pm Break

12.00pm - 12.55pm **Keynote presentation: Dr. Carlos Orihuela**



The Virtual Streptococcal Seminar Series
Welcomes

Carlos Orihuela, Ph.D.
Professor, Department of Microbiology
University of Alabama at Birmingham
Sept 10th, 2020 12pm EDT

“Help! Pneumonia put holes in my heart”

12.55pm - 1.00pm Break

1.00pm - 1.30pm **Flash talks**

Discussion Leader: **Dr. Rebecca Keogh** (University of Colorado-Anschutz)

- 1.00pm - 1.05pm **Syeda Ayesha Ali** (Dr. Muhammad Kamran Taj, University of Balochistan)
“16S rRNA based identification of Pneumococcal meningitis among the patients in Quetta tertiary hospital”
- 1.05pm - 1.10pm **Sydney Herring** (Dr. Elsa Bou Ghanem, University at Buffalo)
“A2B Adenosine Receptor signaling impairs host resistance against *Streptococcus pneumoniae* Infection”
- 1.10pm - 1.15pm **Marlyd Mejia** (Dr. Kathryn Patras, Baylor College of Medicine)
“Human Milk Oligosaccharides alter the vaginal microbiota to limit Group B *Streptococcus* vaginal colonization”
- 1.15pm - 1.20pm **Dr. SangSang Park** (Drs. David Briles and Carlos Orihuela, University of Alabama at Birmingham)
“*Streptococcus pneumoniae* binds to dying host cells worsening secondary infection following Influenza”
- 1.20pm - 1.25pm **Keira Burns** (Dr. Helen Shaw, National Institute for Biological Standards and Control and London School of Hygiene and Tropical Medicine)
“Development of a glycoconjugate vaccine against Group A *Streptococcus* (GAS) using chemical and biological conjugation methodologies”
- 1.25pm - 1.30pm **Ashleigh Riegler** (Dr. Carlos Orihuela, University of Alabama at Birmingham)
“Necroptosis inhibition prevents acute and long-term cardiac damage during pneumococcal pneumonia and invasive pneumococcal disease”