Centers of Biomedical Research Excellence

Oklahoma Center for Respiratory & Infectious Diseases

5th Annual Research Retreat

Tuesday, April 3rd, 2018

7:30am-5:00pm

Meditations

1205 N Country Club Rd, Stillwater, OK 74075

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OSU VP Office for Research

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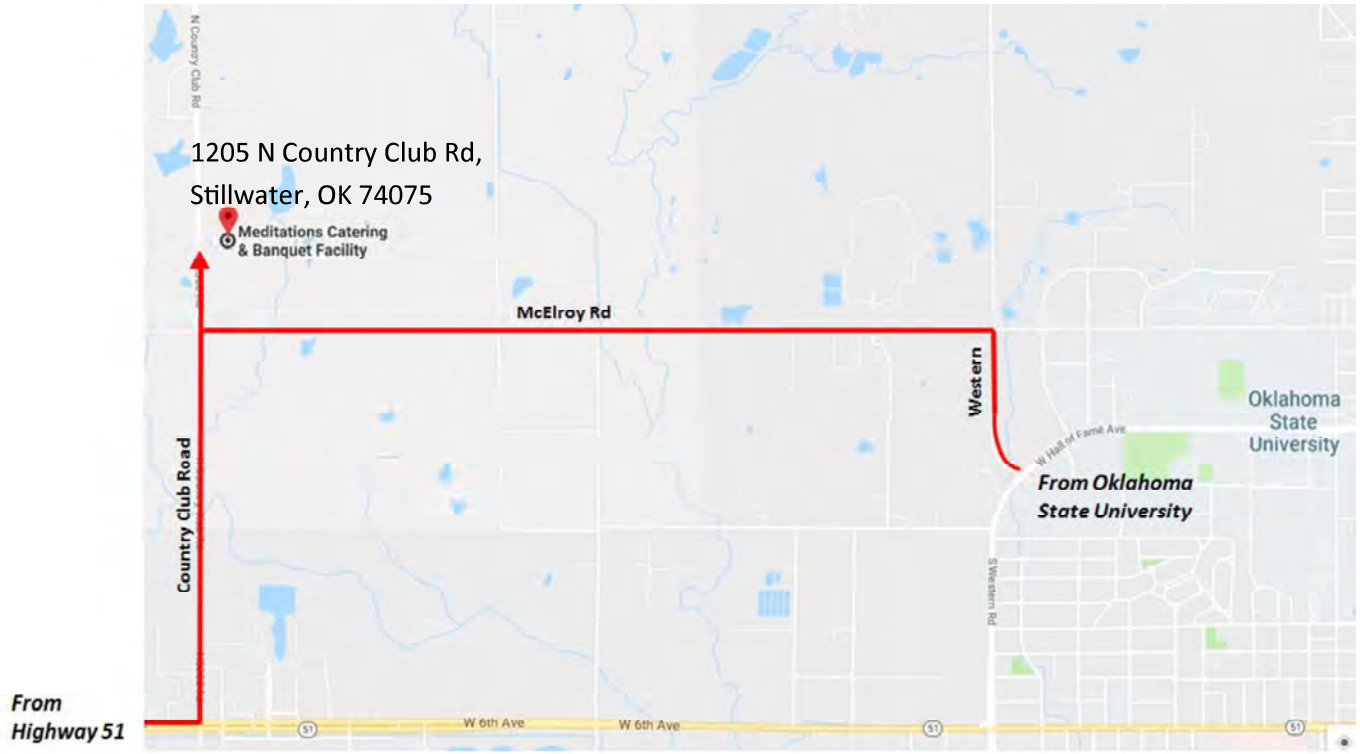
Map of the Venue



Oklahoma Center for Respiratory & Infectious Diseases

Schedule

Tuesday, April 3, 2018

07:30-08:30 Registration and Breakfast; Please drop off posters at the registration table.

08:30-08:50 Opening Remarks
Kenneth Sewell, Ph.D., Vice President for Research, Oklahoma State University
Anne Pereira, Ph.D., Dean, Graduate College, University of Oklahoma Health Sciences Center
Director's Report
Lin Liu, Ph.D., Physiological Sciences, Center for Veterinary Health Sciences, Oklahoma State Univ

8:50-9:00 Special Presentation
Shanjana Awasthi, Ph.D. Pharmaceutical Sciences, College of Pharmacy, University of Oklahoma Health Sciences Center
My Road to Success in Obtaining R01

Session I (Session Chair: Jordan Metcalf, M.D., Medicine, University of Oklahoma Health Sciences Center)

09:00-09:40 Keynote Address #1
Elaine Tuomanen, Ph.D., Chair, Infectious Diseases Department; Director, Children's Infection Defense Center, St. Jude Children's Research Hospital
TBN

09:40-10:00 Phase II Project Presentation #1
Marianna Patrauchan, Ph.D., Microbiology and Molecular Genetics, College of Arts and Sciences, Oklahoma State University
Two components of Ca regulatory network in Pseudomonas aeruginosa

10:00-10:20 Phase II Project Presentation #2
William Michael McShan, **Ph.D.**, Pharmaceutical Sciences, College of Pharmacy, University of Oklahoma Health Sciences Center
Phage-like Chromosomal Islands in Streptococcus pneumoniae Modulate the Host Inflammatory Response

10:20-10:40 Coffee Break

Session II (Session Chair: Susan Kovats, Ph.D., Arthritis & Clinical Immunology Research Program, Oklahoma Medical Research Foundation)

10:40-11:00 Phase I Project Presentation #1
Heather Gappa-Fahlenkamp, Ph.D., Chemical Engineering, College of Engineering and Architecture Technology, Oklahoma State University
An Examination of the Stepwise Complexity of the Human Tissue-Engineered Lung Model to Study Airway Reactivity to H1N1 and H3N2 Influenza A Virus Infections

11:00-11:20 Pilot Project Presentation #1
Yu Feng, Ph.D., Chemical Engineering, College of Engineering and Architecture Technology, Oklahoma State University
Predicting the Within-Host Dynamics of Influenza A Virus Infection in Upper Airway Epithelial Cells using a Multiscale In Silico Model

11:20-11:40 Phase I Project Presentation #2
Tom Oomens, **Ph.D.**, Veterinary Pathobiology, Center for Veterinary and Health Sciences, Oklahoma State University
Developing Vaccines for Respiratory Syncytial Virus

11:40-11:50 Abstract #1
Prakash Sah, Microbiology and Molecular Genetics, Oklahoma State University
The Host Protein Kinase C is Manipulated by Chlamydia trachomatis During Infection

11:50-12:00 Core Report #1: Animal Models Core
Myron Hinsdale, **DVM, Ph.D.**, Physiological Sciences, Center for Veterinary and Health Sciences, Oklahoma State University

12:00-12:20 Group Photo

12:20-1:30 Lunch

Session III (Session Chair: Clinton Jones, Ph.D., Veterinary Pathobiology, Center for Veterinary and Health Sciences, Oklahoma State University)

01:30-02:10 Keynote Address #2
G.R. Scott Budinger, **M.D.,** Chief of Pulmonary & Critical Care; Professor of Medicine and Cell and Molecular Biology, Northwestern University, Feinberg School of Medicine
Understanding the Molecular Signatures of Aging

02:10-02:30 Phase II Project Presentation #3
Shitao Li, **Ph.D.**, Physiological Sciences, Center for Veterinary and Health Sciences, Oklahoma State University
Role of ZFC3H1 in Limiting Influenza A Virus

02:30-02:50 Phase II Project Presentation #4
Veronique Lacombe, Ph.D., Physiological Sciences, Center for Veterinary and Health Sciences, Oklahoma State University
The Role of Gucose Homeostasis during Respiratory Infection

02:50-03:10 Phase I Project Presentation #3
Raju Teluguakula, **Ph.D.**, Physiological Sciences, Center for Veterinary and Health Sciences, Oklahoma State University
Neutrophil-Mediated Acute Lung Injury in Influenza Virus Pneumonia

03:10-03:20 Abstract #2
Ibrahim Hatipoglu, Arthritis & Clinical Immunology Program, Oklahoma Medical Research Foundation, Oklahoma City
Dendritic Cell Intrinsic IRF 4 Expression Regulates Production of the Regulatory Cytokines TGF and IL-10 During Influenza Virus Infection

03:20-03:30 Core Report #2: Immunopathology Core
Jerry Ritchey, **DVM, Ph.D.**, Veterinary Pathobiology, Center for Veterinary and Health Sciences, Oklahoma State University

03:30-03:40 Core Report #3: Molecular Biology Core
Lin Liu, Ph.D., Physiological Sciences, Center for Veterinary and Health Sciences, Oklahoma State University

03:40-03:50 Refreshment Break

03:50-04:50 Poster Session

04:50-05:00 Announcement of Poster Competition Winners

Abstract List

Presenter	Abstract No.	Abstract Title
Ainsua-Enrich, E.	101	IRF4-dependent DCs regulate T cell effector and memory responses in influenza virus infection
Anderson, M.	102	Three-dimensional Reconstruction and Quantification of PGP 9.5 -Immunoreactive Intra-Epidermal Nerve Fibers
Bamunuarachchi, G.	103	miR-9-1 attenuates influenza A virus replication by targeting Tankyrase 1
Bhowmick, Rudra	104	A 3D human tissue-engineered lung model for the study of influenza A infection
Campolo, A.	105	Metformin Treatment Rescues Alterations of Insulin-Sensitive Glucose Transporters in the Lung of Insulin-Resistant Mice
Eslinger, C.	106	Modulation of Nerve Growth Factor (NGF) Expression in Trinitrobenzene Sulfonic Acid (TNBS) Induced Colitis in Rat Colon
Gujar, V.	107	Expression pattern of Nerve Growth Factor in epidermis during attenuated mycobacteria induced arthritis in rats.
Haghnegahdar, A.	108	Predicting the Within-Host Dynamics of Influenza A Virus Infection in Upper Airway Epithelial Cells using a Multiscale CFPD-HCD model
Hatipoglu, I.	109	Dendritic cell intrinsic IRF4 expression regulates production of the regulatory cytokines TGFβ and IL-10 during influenza virus infection
Kadel, S.	110	The Sex Bias in Group 2 Innate Lymphoid Cells (ILC2s) in Lungs and Bone Marrow is regulated by Androgens
Kafer, L.	111	Elevated Calcium Increases *Pseudomonas aeruginosa* Virulence in *Galleria mellonella.*
King, M.	112	A Putative Phytase, CarP, Required for Calcium Tolerance and Virulence in *P. aeruginosa,* is Differentially Regulated by Host Factors.
La Force, C.	113	Cloning and expression of *Chlamydia trachomatis* inclusion membrane proteins
Mares, S.	114	Generating Genetic Constructs for Studying the Components of Calcium Signaling Network in *Pseudomonas aeruginosa*
McCullor, K.	115	*Streptococcus pneumoniae* Phage-like Element SpnCI Increases Virulence in an Acute Invertebrate Infection Model
Mcleod, D.	116	Evolutionary Studies of CarP, component of Ca^{2+} regulatory network, in *Pseudomonas aeruginosa* Clinical Isolates
Patil, G.	117	TRIM41-Mediated Ubiquitination of Nucleoprotein Limits Influenza A Virus Infection

Abstract List

Presenter	Abstract No.	Abstract Title
Poudel, N.	118	Xylosyltransferase deficiency causes exacerbated response to lipopolysaccharide induced acute lung injury
Pulavendran, S.	119	Neutrophil-platelet aggregations promote the pathology in acute-lung injury in influenza pneumonia
Pushparaj, S,	120	Regulation of influenza A virus infection by lnc-PINK1-2, a novel cellular lncRNA.
Qian, L.	121	E protein activity suppress ILC2 differentiation at multiple stages of lymphocyte development
Rogers, R.	122	Investigating Transcriptional Regulation of *efhP*, a Gene Involved in Calcium-Regulated Virulence in a Human Pathogen *Pseudomonas aeruginosa*
Sah, P.	123	The Host Protein Kinase C is manipulated by *Chlamydia trachomatis* During Infection
Senavirathna, L.	124	Hypoxia and Transforming Growth Factor β regulation of long non-coding RNA FENDRR in human pulmonary fibroblasts
Truelock, M.	125	Elevated Levels of Calcium Increase Rhamnolipid Production in *Pseudomonas Aeruginosa*
Xu, D.	126	Smurf2 is required for the TGF-β1-induced differentiation of fibroblast to myofibroblast
Yang, X.	127	miR-29a suppresses influenza A virus infection by targeting frizzed 5
Zhao, M.	128	TRIM32 Ubiquitination of OTULIN Regulates NF-kB Signaling Pathway
Zhu, L.	129	The signaling pathways of Akt and β-catenin establish a positive feedback loop that stimulate bovine herpesvirus 1 productive infection
Zhu, Z.	130	Knock-down of IFIT 1 and 2 enhances influenza virus infection in human lung epithelial cells