

**LARRY S. SCHLESINGER, MD**  
**Curriculum Vitae and Bibliography**

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**Personal Data**

Address and telephone numbers

Office:

Texas Biomedical Research Institute

7620 NW Loop 410

San Antonio, TX 78227

[lschlesinger@txbiomed.org](mailto:lschlesinger@txbiomed.org)

(210) 258-9419

Home:

300 E Basse Road

Apt. 1202

San Antonio, TX 78209

Date of Birth: November 19, 1955

Place of Birth: New Jersey

Citizenship: USA

Marital Status: Married (Judy)

Children: two (Michael and Eva)

**Education**

<u>Year</u>	<u>Degree</u>	<u>Institution</u>
1978	BA (Biology)	Cornell University, Ithaca NY
1982	MD	Rutgers Medical School, Piscataway, NJ

**Post-doctoral Training**

<u>Year</u>	<u>Position</u>	<u>Institution</u>
1982-1983	Intern, Internal Medicine	University of Michigan Hospitals, Ann Arbor, MI
1983-1985	Resident, Internal Medicine	University of Michigan Hospitals, Ann Arbor, MI
1985-1986	Chief Medical Resident	University of Michigan Hospitals, Ann Arbor, MI
1986-1988	Clinical Fellow in Infectious Diseases	UCLA Center for the Health Sciences and UCLA-San Fernando Valley Medical Program, Los Angeles, CA
1987-1991	Research Fellow in Bacterial Pathogenesis	UCLA Center for the Health Sciences, Los Angeles, CA

**Academic Appointments**

1991-1996	Assistant Professor	Division of Infectious Diseases, Department of Internal Medicine University of Iowa College of Medicine, Iowa City, IA
1996-2002	Associate Professor With Tenure	Division of Infectious Diseases, Department of Internal Medicine University of Iowa College of Medicine, Iowa City, IA
1994-2002	Faculty	Interdisciplinary Immunology Graduate Degree Program Graduate College, University of Iowa, Iowa, City, IA
1994-2002	Faculty	Medical Scientist Training Program University of Iowa College of Medicine, Iowa City, IA
1998-2002	Faculty	Department of Microbiology University of Iowa College of Medicine, Iowa City, IA
2002	Professor	Division of Infectious Diseases, Department of Internal Medicine University of Iowa College of Medicine, Iowa City, IA
2002-2017	Samuel Saslaw Professor	Division of Infectious Diseases, Department of Internal Medicine The Ohio State University College of Medicine, Columbus, OH
2002-2017	Professor	Department of Molecular Virology, Immunology and Medical Genetics The Ohio State University College of Medicine, Columbus, OH
2003-2017	Graduate Faculty	The Biomedical Sciences Graduate Program The Ohio State University School of Biomedical Sciences, Columbus, OH

2005-2017	Graduate Faculty	Department of Veterinary Biosciences The Ohio State University College of Veterinary Medicine, Columbus, OH
2005-2017	Professor	Department of Microbiology The Ohio State University College of Arts & Sciences, Columbus, OH
2009-2017	Professor	Division of Environmental Health Sciences, The Ohio State University College of Public Health, Columbus, OH
2011-2017	Professor	Department of Microbial Infection & Immunity, The Ohio State University College of Medicine, Columbus, OH
2017-present	Adjunct Profesor	Department of Microbiology, Immunology and Molecular Genetics, School of Medicine, UTHealth-SA, San Antonio, TX

### Administrative Appointments

1991-2002	Staff Physician	VA Medical Center, Iowa City, IA
1995-2000	Fellowship Director	Division of Infectious Diseases, Department of Internal Medicine University of Iowa College of Medicine, Iowa City, IA
2000-2002	Associate Chair	Department of Internal Medicine University of Iowa College of Medicine, Iowa City, IA
2002-2011	Director	Division of Infectious Diseases, Department of Internal Medicine The Ohio State University College of Medicine, Columbus, OH
2002-2017	Founder/Director	Center for Microbial Interface Biology The Ohio State University, Columbus, OH
2003-2010	Director	BSL3 and Select Agent Program The Ohio State University, Columbus, OH
2008	Associate Director	Medical Scientist Program The Ohio State University, Columbus, OH
2008-2017	Director	Medical Scientist Training Program The Ohio State University, Columbus, OH
2010-2011	Deputy Director	BSL3 and Select Agent Program The Ohio State University, Columbus, OH
2011-2017	First Chair	Department of Microbial Infection & Immunity The Ohio State University, Columbus, OH
2017-present	President and CEO	Texas Biomedical Research Institute, San Antonio, TX

### Certification and Licensure

#### Certification:

<u>Board</u>	<u>Date</u>	<u>Number</u>
Diplomate, National Board of Medical Examiners	1983	101437
Diplomate, American Board of Internal Medicine	1985	101437
Diplomate, ABIM, Infectious Diseases	1989	101437

#### Licensure:

<u>State</u>	<u>Date</u>	<u>Number</u>	<u>Current Status</u>
Michigan	1982	048602	Inactive
Iowa	1991	28156	Inactive
Ohio	2003	35-082083S	Inactive

### Professional Society Memberships

1991-Present	American Society for Microbiology
1991-2005	American Federation for Clinical Research
1991-Present	American Association for the Advancement of Science
1992-1997	Infectious Diseases Society of America (Associate, Member)

1992-Present	American Association of Immunologists
1992-Present	American Society for Cell Biology
1993-1994	Medical School Representative, American Federation for Clinical Research
1994-2005	Member, Central Society for Clinical Research (elected)
1994-2011	Midwest American Federation for Clinical Research (previous counselor)
1995-1999	Counselor, Infectious Diseases Subspecialty Section, Central Society for Clinical Research
1997-1999	TB Committee, IDSA
1998-1999	Chairman, TB Committee, IDSA (nominated)
1999	Chairman-elect, Division U (Mycobacteriology), ASM
1999-2000	Advisory Council for the Elimination of Tuberculosis (ACET)
1999-Present	Society for Glycobiology
1999-2002	National Coalition for the Elimination of Tuberculosis (NCET)
2000	Chairman, Division U (Mycobacteriology), ASM
2008-2009	Council, Central Society for Clinical Research (elected)

### Professional Activities

**Regular Reviewer (average 1/week from one of the following):** *The Journal of Immunology, Infection and Immunity, Immunity, The Journal of Infectious Diseases, Journal of Clinical Immunology, Spine, American Journal of Physiology: Lung Cellular and Molecular Physiology, Trends in Microbiology, The Journal of Clinical Investigation, Journal of Leukocyte Biology, Molecular Microbiology, JAMA, PNAS, Journal of Experimental Medicine, Journal of Biological Chemistry, Nature Genetics, Microbial Pathogenesis, Microbiology, Nature Medicine, Nature, Nature Methods, Science, American Journal of Respiratory and Critical Care Medicine, Journal of Investigative Dermatology, Journal of Cell Science, FEMS Microbiology Reviews, Mucosal Immunology, Frontiers series, EMBO Reports, Tuberculosis, Scientific Reports, Nature Communications, eLife, Science Immunology*

### Editorial Boards

2001-Present	Infection and Immunity
2007-Present	Tuberculosis
2010-Present	Frontiers in Microbial Immunity
2012	Guest editor: mBio, PNAS
2012-Present	Frontiers Cellular and Infection Microbiology
2016	Guest editor, eLife

### Scientific Advisory Boards

2009-2013	Archivel Farma, Barcelona, Spain
2010-present	Sevident
2013-present	Navidea/Macrophage Therapeutics

### Other

1992	Ad hoc reviewer, special review NIH Study Sections, NIAID
1993, 1996, 1998, 1999, 2000	Ad hoc reviewer, NIH Study Section, BM1, NIAID
1994, 1996	Ad hoc reviewer, Merit Review Study Section, VAMC
1996	Site Visit Team, Laboratory of Mycobacteria, FDA
1996	Consultant for Oncology Advisory Committee, FDA
1997	Ad hoc reviewer, British Columbia Health Research Foundation
1998	Invited Participant, Workshop the Immunopathogenesis of MAC infection, NIH, NIAID
1999	Invited Participant, Research Priorities for the Centers for Disease Control Center on STDs, HIV and TB
1999	Invited Participant, Workshop, Tuberculosis Infection Control in the 21st Century, Sponsored by ATS, ACCP and the IDSA
2000	Reviewer, Vaccine Innovation Program grant applications for Sequella Global Tuberculosis Foundation

- 2002 Invited Participant, Special Emphasis Panel for review of proposals for tuberculosis vaccines, NIH-NIAID-RFP
- 2003 Reviewer, The Wellcome Trust Principal Research Fellowship
- 2003 Member HIV/TB Subcommittee of the national ACTU
- 2004 **Chairman, Special Emphasis Panel NIH PO1 review, NIAID**
- 2004 Scientific Reviewer, Panel Member, 2004 Grand Challenges in Global Health, FNHI and the Gates foundation
- 2004 **Chairman, Special Emphasis Panel (ZRG1 IDM-J 02 M), NIAID**
- 2005-2007 Member, NIH Study Section, ZRG1 F13 20 L, Infectious Diseases and Microbiology
- 2005 **Chairman, Special Emphasis Panel (ZRG1 IDM-J 02 M), NIAID**
- 2005, 2006 Ad hoc reviewer, NIH, NIAID Study Section, Host Interactions with Bacterial Pathogens
- 2005-2014 Executive Board, Great Lakes Regional Center of Excellence (GLRCE) for Biodefense and Emerging Infectious Diseases Research (research proposal review panel)
- 2006 **Chairman, NIH, NIAID Study Section, ZAI1 DDS-M (C2), TBRU**
- 2006 Session Chair, Great Lakes Regional Center of Excellence Annual Meeting
- 2007 Site visit team, Laboratory of Mycobacterial Diseases and Cellular Immunology, FDA
- 2007 Moderator, TB Epitope Workshop, NIH, NIAID
- 2007 Reviewer, NIH NIAID Special Study Section, ZRG1 IMM-J 03
- 2007-2011 **Regular member, NIH Study Section, Clinical Research and Field Studies of Infectious Diseases (Chair 2009-2011)**
- 2007 Member site visit team, NCRR ZRR1 CM-8, Tulane National Primate Research Center
- 2007 Reviewer, NIH NHLBI K08 and K02 study section, ZHL1-CSR-N-F1
- 2007 Reviewer, University of Wisconsin-Milwaukee Graduate School Research Growth Initiative
- 2008-2014 Member, Emergency Response Team, GLRCE
- 2009-2010 External Advisory committee, NIH T32 training grants in infectious diseases and biodefense, University of Virginia
- 2010-2010 AAMC GREAT MD-PhD Section Program Committee
- 2010 Ad hoc reviewer, International Research in Infectious Diseases including AIDS (IRIDA) NIH Study Section
- 2010-2014 External Review Committee, Rocky Mountain NIH RCE
- 2011 External Reviewer, Austrian Science Fund
- 2012 AAMC MD-PhD Section Nominating Committee
- 2012 Panel of senior chairs for new study section chair orientation, CSR, Bethesda, MD
- 2012 Ad hoc, NIH NIAID Council
- 2013-2015 **HHMI Medical Fellows Program review panel**
- 2013-present External Advisory Committee, T32 training grant "Mechanisms of Parasitism", University of Iowa
- 2013-present External Advisory Committee, Immunology Center, University of Iowa
- 2013-present **NIH NIAID Council Member**
- 2013 Discussant, AERAS Human TB Challenge Model Workshop, Rockville, MD, August 8
- 2013-2017 **AAMC GREAT Group, MD-PhD Section Steering Committee**
- 2013-present External Advisory Board, Center for Predictive Medicine, University of Louisville
- 2013 Reviewer, NIH NIAID Special Emphasis Panel, ZRG1 AARR-D (59) and ZRG1 AARR-D (91)
- 2013 Planning committee and participant, "Advancing Host Directed Therapy for Tuberculosis" NIH Workshop, April 15 and 16, 2014
- 2013-2017 **Trans-NIH Big Data to Knowledge (BD2K) Multi-Council Working Group, NIAID representative**
- 2014-present External Advisory Committee, Case Western Reserve University, T32 training grant, Geographic Medicine and infectious disease
- 2014 Panel member, Aeras/NIAID prevention of sustained Mycobacterium tuberculosis infection meeting, NIAID, Rockville, MD, November 7, 2014
- 2014 Invited discussant, NIAID T32 Program Directors Meeting, Bethesda, MD, December 11-12, 2014
- 2014-present External Advisory Board, Duke University T32 Interdisciplinary Research Training Program in AIDS
- 2015 AAMC ROCC Research in Residency Meeting May 28, 2015 (participant)

- 2015 Ad hoc reviewer, Board of Scientific Counselor review, Inflammation, Immunology and Disease Laboratory, Division of Intramural Research, NIEHS, Research Triangle Park, NC, November 15-17, 2015.
- 2015-2016 Agenda Planning Committee and Co-Chair, NIAID and NIDDK Workshop "Developing a comprehensive therapeutic research strategy for the converging epidemics of TB, T2DM and HIV. May, 2016
- 2016 NIH NIAID workshop "The impact of Mycobacterium tuberculosis immune evasion on protective immunity: implications for TB vaccine design, March 7-8, 2016 (participant)
- 2016 **President-Elect of the National Association of MD PhD Programs, Chair-elect of the AAMC GREAT Group M.D./Ph.D. Section Steering Committee**
- 2016 AAMC Leadership Forum. Creating a culture of wellbeing and resilience in academic medicine. June 13-14, 2016 (participant)
- 2016 Abstract reviewer, 2017 AAP/ASCI/APSA Meeting
- 2017 Session Chair, Bacterial evasion of immunity, Keystone Symposium on Tuberculosis, January 14-18, 2017

### University of Iowa

- 1991-1996 Resident Recruitment Committee
- 1991-1997 Drug Use Evaluation Subcommittee of the Pharmacy and Therapeutics Committee, IC VAMC
- 1992-1997 Resident Selection Committee
- 1992-2002 Tuberculosis Task Force
- 1993-2002 BSL 3 Facility Advisory Committee
- 1994-2002 Cell Fluorescence Core Facility Advisory Committee
- 1995-2002 Chairman, Tuberculosis Task Force
- 1996-1997 Department of Medicine Promotions Committee
- 1996-1999 Co-chairman, Dept Medicine Research Day
- 1997-2000 COM GC/MS Advisory Committee
- 1998-2002 Director, BSL 3 Facility, IC VAMC
- 1998-2002 Dept Medicine P & S Reclassification Committee
- 1999 Dept Microbiology Faculty Search Committee
- 2000-2001 Interviewer Medical School Admissions Committee
- 2000 COM Executive Committee
- 2000-2002 Graduate Studies Committee, Graduate Program in Immunology
- 2000-2002 Dept Med Research Advisory Committee
- 2000-2002 Dept Microbiology Undergraduate Advisor
- 2001-2002 Faculty Participant, Communities for Excellence in Learning and Leadership for Society (CELLS)

### Ohio State University

- 2003-2009 Dept Medicine Research Advisory Committee
- 2003-2008 Faculty liaison for Microbial Pathogenesis special area of emphasis, Integrated Biomedical Science Graduate Program
- 2003 Search committee for Director of Clinical Microbiology
- 2003-2017 Davis Heart and Lung Research Institute Investigator
- 2003-2017 Member of the Comprehensive Cancer Center
- 2003 Dept Medicine Corporate Expense allocation Sub-Committee
- 2003-2004 Dept Medicine Space Committee
- 2004-2007 Graduate Studies Committee, Dept Molecular Virology, Immunology, and Medical Genetics
- 2004-2017 Scientific Advisory Committee, Mathematical Biosciences Institute
- 2004-2017 Member, Pulmonary Training Grant: Molecular Mechanisms of Lung Inflammation
- 2004-2009 Member, Training Grant in Molecular Virology, Immunology, and Medical Genetics: Integrative Immunobiology
- 2004 Intramural Reviewer: OSU Dept Molecular, Cellular, and Developmental Biology
- 2004-2009 Research Resource Coordinating Committee (RRCC), COM
- 2004-2009 Faculty Search Committee, Center for Microbial Pathogenesis, Children's Research Institute
- 2005 Faculty Search Committee, Dept Veterinary Biosciences
- 2005-2007 Chair, Graduate Studies Committee, Dept Molecular Virology, Immunology, and Medical Genetics

2005-2009 Search Committee, Henry G. Cramblett Chair in Medicine, Dept Pediatrics, Columbus Children's Research Institute  
2004-2006 Laboratory and Clinical Testing Utilization Committee, OSUMC  
2005-2008 Leadership Council for Clinical Value, OSUMC  
2005-2007 Search Committee, Chair Veterinary Clinical Sciences  
2005-2008 Systems and Integrative Biology Program Operations Committee, COM  
2005-2017 Chair, Steering committee, OSU PHPID TIE Program  
2006-2007 Chair, COM Pillar I Strategic Plan for People: Build a talent base  
2006-2011 Member, OSUP Human Resources Committee  
2006-2010 Member, Dept Internal Medicine Compensation Committee  
2006-2009 Faculty search Committee, Infectious Diseases Epidemiology, College of Public Health  
2007-2009 OSUMC Research Committee  
2007-2009 Search Committee, Center for Vaccines and Immunity, Nationwide Children's Hospital  
2008-2009 Co-Director, KL2 program, CTSA  
2008-2009 Member, Education/Career Development Steering Committee, CTSA  
2008 NIH Panel member, COM  
2008-2009 Member, University Task Force on the Biological and Life Sciences, OSU  
2008-2012 Associate member, Center for Critical Care  
2009-2014 Campus Chemical Instrument Center Oversight Committee  
2009 Laboratory management seminar for post-doctoral researchers  
2009 COM Task Force on graduate student fee authorizations and stipends  
2009-2010 COM governance restructuring task force  
2009-2014 OSUCCC Microscopy Shared Resource Advisory Committee  
2009-2014 COM Research Deans and Staff Advisory Group  
2009-2014 COM Office of Research Advisory Committee  
2010-2017 Member, Faculty mentorship program, Division of Pulmonary, Critical Care, Allergy and Sleep Medicine  
2010-2010 OSU Life Sciences Steering Committee  
2010-2014 Advisory committee, Research Education, COM  
2010-2014 Program faculty member, NIH-funded Discovery PREP (Postbaccalaureate Research Education Program)  
2010-2017 Core Leadership Team Member, HHMI Med Into Grad Scholars program  
2011-2017 DHLRI Internal Advisory Board  
2011-2017 OSUMC Executive Curriculum Committee  
2012 Search Committee, Chair of the Department of Surgery  
2012-2013 COM Task Force, Operational Models in the Basic Sciences  
2012-2014 COM LCME Self-Study Task Force, Institutional Setting  
2012 Search Committee, Chair of Pediatrics  
2013 FAME Faculty School workshop on promotion planning committee  
2013 Faculty Advisory Board, OSU Health and Wellness Discovery Theme  
2013 Internal Advisory Board, CCTS Research Education, Training and Career Development  
2014-2017 Commencement Speaker Advisory Committee  
2014-2017 Discovery Themes search committee action team  
2015-2017 OSU EOCA Committee  
2016-2017 COM, Elections and Appointments Committee

#### **Texas Biomedical Research Institute**

2017-present Board of Directors, Biomed SA  
2017-present Board of Directors, San Antonio Medical Foundation

#### **UT-Health San Antonio**

2017-present Steering Committee, MD PhD training program  
2017-present Member, NIH CTSA

#### **Past areas of Research Interest**

1. Hormonal control of sexual behavior in reptiles and avian species. (1975-1977)

2. Animal model for study of altered brain blood flow distribution in chronic hypoxia and hypercapnia. (1979)
3. *Staphylococcus aureus* meningitis: a broad based epidemiologic study. (1984-1985)
4. Alternative complement pathway activation in bacteremia. (1985-1986)
5. Human monocyte interactions with *Mycobacterium leprae*. (1987-1991)

### Current Projects

1. Pathogenesis of intracellular pathogens. (1987-Present)
2. The human complement system in bacterial pathogenesis. (1987-Present)
3. Human mononuclear phagocyte interactions with *M. tuberculosis*. (1991-Present)
4. *M. tuberculosis* and pulmonary innate immunity. (1992-Present)
5. Genes involved in *M. tuberculosis* cell wall lipoglycan biosynthesis. (1999-Present)
6. Human mononuclear phagocyte interactions with *Francisella* species. (2003-Present)
7. Genetic polymorphisms that lead to host susceptibility to infectious diseases. (2011-present)
8. Macrophage microRNAs and tuberculosis. (2011-present)

### Awards and Honors

- 1974-1978 Cornell University: Distinction in all subjects, Junior Honor Society, Quill and Dagger Society, Dean's List, President Sigma Phi Fraternity
- 1981-1982 Rutgers Medical School: AOA National Honor Medical Society, Joseph Collins Foundation Scholarship, Littman Chapman Memorial Fund Scholarship
- 1985 Department of Medicine House Officer Research Award, U Michigan Hospitals
- 1986 ICAAC Travel Grant, The National Foundation for Infectious Diseases
- 1991 Florence Lindsay Trust Award for Research in Biochemistry, U Iowa College of Medicine
- 1993 Iowa Department of Public Health, Outstanding Volunteer Service to The State of Iowa
- 1993 ICAAC Young Investigator Award**
- 1994 Co-Convenor, Infectious Diseases Session, Midwest AFCR Meeting
- 1997 Fellow, Infectious Diseases Society of America
- 2003 Frank N. Nelson Distinguished Lecturer in Molecular Biology, Biotechnology and Medicine. Montana State University
- 2006 Donald V. Unverferth Dept Internal Medicine Research Award, OSU
- 2007 Excellence in Teaching Award, Dept Molecular Virology, Immunology and Medical Genetics, OSU
- 2008 Fellow, American Association for the Advancement of Science**
- 2010 Honoree, Mortar Board and Sphinx Honor Societies, OSU
- 2011 OSU Distinguished Scholar Award**
- 2011 Fellow, American Academy of Microbiology**
- 2011 Distinguished Mentor Award, Davis Heart & Lung Research Institute, OSU
- 2012 Harrington Discovery Institute Innovator Scholar**
- 2015 OSU College of Medicine Distinguished Professor Award**
- 2016 Elected member, Association of American Physicians**
- 2016 OSU Medical Student Landacre Distinguished Researcher Award
- 2016 Frederic C. Bartter Professor in Clinical Investigation, UTSA HSC
- 2017 OSU College of Medicine Research Mentor of the year award

### Postdoctoral Fellows

Name	Role	Degree at Entry	Training Period	Research Topic	Awards/Honors	Current Position
Cecilia D. Gaynor	Fellow, Infectious Diseases	MD	1994-1996	Tuberculosis and surfactants	Recipient ALA Research Fellowship Award NIH NIAID K08 award	ID Subspecialist, Kentucky
Lorraine Wiegand	MPAS Senior Clinical Paper	PA	1994			
Byoung Kang	Post-doctoral Researcher; Research Investigator	PhD	1994-2001	Trafficking of mycobacterial carbohydrates		Scientist ADA, Illinois

Name	Role	Degree at Entry	Training Period	Research Topic	Awards/Honors	Current Position
Scott Ferguson	Fellow	MD	1995-2000	Tuberculosis and surfactants	ALA Research Fellowship Award NIH NIAID K08 award	Assoc Prof, Div Pulmonary and Critical Care Medicine, U of Wisconsin
Barry Ezell	Visiting PhD	PhD	1995	Macrophage receptors and tuberculosis		
Avina Kolareth	Post-doctoral Researcher	MD	1997-1998	Bismuth therapy for tuberculosis; M tuberculosis pathogenesis		Pathologist, Iowa
Lucy Desjardin	Post-doctoral Researcher; Assistant Research Scientist; Associate Research Scientist	PhD	1998-2003	<i>M.tb</i> carbohydrate synthetic enzymes		Program Manager, Molecular Research and Development, University of Iowa  Hygienic Laboratory and Adjunct Faculty, College of Public Health, University of Iowa
Alison Beharka	Post-doctoral Researcher	PhD	1999-2003	Surfactant protein A and tuberculosis	U Iowa Infectious Diseases and Immunology Training Grant Postdoctoral Positions	Science educator, Iowa
Amanda MacFarlane	Research Associate	PhD	2002-2006	Tularemia & lung innate immunity		No longer in field
Jordi Torrelles	Post-doctoral researcher	PhD	2003-2008	Production and metabolism of mycobacterial LAM in human macrophages	Parker B. Francis Award NIH K99/R00  Warren Award, Dept. Medicine, OSU	Assistant Professor, Microbial Infection & Immunity. OSU
Ashwin Balagopal	Post-doctoral researcher	MD	2004-2006	Tularemia and macrophages		Assistant Professor, Div. Inf. Dis. Johns Hopkins
Alissa Ackelson	Infectious Diseases Fellow	MD/PhD	2004-2006	Inflammatory response of macrophages to <i>M.tb</i>		ID subspecialist, Ohio
Martin Valdivia-Arenas	Pulmonary and Critical Care Fellow	MD	2005-2007	<i>M.tb</i> and NOD proteins		Pulmonary subspecialist, Ohio
Craig Bartling	Post-doctoral Researcher	PhD	2008-2009	Structural characterization on <i>M.tb</i> carbohydrates and lipids		Research Scientist, Battelle
Jonathan (Robert) Honegger	Fellow, Pediatric ID	MD	2007-2009	CMV mother to child transmission		Assistant Professor of Peds, OSU
Judy Day	Post-doctoral Researcher	PhD	2007-2010	Mathematical modeling of lung immune responses		Assist Prof, Math & Eng./Comp. Sci., U Tenn
Doug Meyer	Research Associate	PhD	2008-2010	Tuberculosis and surfactants		No longer in field
Evelyn Guirado	Post-doctoral Researcher	PhD	2008-2012	Carbohydrate biosynthesis of the mycobacterial cell wall	ALA Senior Research Training fellowship	Research Scientist, OSU
Lanhao Yang	Post-doctoral Researcher	PhD	2009-2012	Carbohydrate biochemistry of the mycobacterial cell wall		Post-doc, Colorado State U, Laboratory manager and instrument technician, Carlton College

Name	Role	Degree at Entry	Training Period	Research Topic	Awards/Honors	Current Position
Shipan Dai	Post-doctoral Researcher	PhD	2010-2012	Molecular mechanisms of Francisella entry into macrophages		No longer in field
Tracy Carlson	Post-doctoral Researcher	DVM/PhD	2011-2012	Collectins and macrophages	NIH K01 Award CL Davis Foundation Student Scholarship Award	Post-doctoral researcher, OSU; Research Scientist II, Baxter
Rachel Leander	Post-doctoral Researcher	PhD	2010-2013	Mathematical modeling of pathogens into host cells		Assistant Professor of Mathematics, Middle Tenn State U
Eusondia Arnett	Post-doctoral researcher	PhD	2013-2017	Macrophage PPAR in immunity	NIH Institutional T32 training grant recipient ALA Senior Research Training Fellowship-declined	Staff Scientist, Texas Biomed
Ky Hoang	Post-doctoral researcher	PhD	2013-2017	Tularemia/TB pathogenesis and drug development		Post-doctoral fellow, OSU
Landon Locke	Post-doctoral researcher	PhD	2015-2017	In vivo imaging of tuberculosis	NIH Institutional T32 training grant recipient	Post-doctoral fellow, OSU

### Research Scientists

Name	Role	Degree at Entry	Training Period	Research Topic	Awards/Honors	Current Position
Shankar S. Iyer	Research Scientist	PhD	1994-1996	Mannose receptor-mediated uptake of lipoarabinomannan from virulent and attenuated strains of <i>M.tb</i> by human macrophages		Research Scientist, Infectious Diseases, Internal Medicine, University of Iowa
Abul Azad	Research Scientist	PhD	2003-2017	Molecular definition of <i>M.tb</i> recognition and trafficking pathways in macrophages		Adjunct assistant Professor 2003-2013; Adjunct Associate Professor 2013-2017, Microbial Infection & Immunity, OSU; Staff Scientist, Texas Biomed
Murugesan Rajaram	Research Scientist	PhD	2008-2013	Biochemical signaling in the <i>M.tb</i> -macrophage interaction		Research Assistant Professor, Microbial Infection & Immunity, OSU
Evelyn Guirado	Research Scientist	PhD	2012-2015	TB granuloma models and immune responses		Research Scientist, Project Coordinator, Industry (Hipra). Barcelona Spain

### Medical Students Supervised

Name	Role	Degree at Entry	Training Period	Research Topic	Awards/Honors	Current Position
Steven J. Fogarty	Medical Student	BS	1992-1993	Transcriptional analysis of <i>M.tb</i> -infected macrophages	Recipient, AHA Medical Student Research Fellowship Award	Ophthalmologist, Tucson, AZ

Name	Role	Degree at Entry	Training Period	Research Topic	Awards/Honors	Current Position
Sigrid Wayne	Medical Student	BS	1993	Pathogenicity of <i>M.tb</i> and the oxidative burst during phagocytosis by human macrophages	Recipient, U Iowa Medical Student Research Fellowship Award	Residency, University of Iowa, Department of Pathology, ENT Pathologist, Oklahoma
Brian Potts	Medical Student	BS	1993-1995	Transcriptional analysis of <i>M.tb</i> -infected macrophages	Recipient, U Iowa Infectious Diseases Training Grant Pre doc Position	Radiologist, Iowa
Carren Wang	Medical Student	BS	2004	<i>M.tb</i> cell wall carbohydrates and macrophages	Recipient Roessler Award OSU IDSA Infectious Diseases Summer Scholarship	Resident, Internal Medicine, Washington Medical Center
Elisabeth Hesse	Medical Student		2006-2007	Polymorphisms in C-type lectins	NIH Roadmap Training Program in Clinical Research Summer Program 2006 T32 training grant recipient	Resident, Walter Reed Army Institute of Research, Silver Spring, Maryland
Bret Betz	Medical Student	BS	2008-2009	Beta-glucans and <i>M.tb</i>	Recipient Roessler Award OSU IDSA Infectious Diseases Summer Scholarship	Medical Student, OSU
Jessica Morris	Medical Student	BS	2009-2010	Macrophage signaling in tuberculosis		Medical Student, OSU
Michael Li	Medical Student	BS	2015	Characterization of lymphocyte populations in TB granulomas	Recipient Roessler Award OSU	Medical Student, OSU

### Thesis Advisor

Name	Role	Degree at Entry	Training Period	Research Topic	Awards/Honors	Current Position
Zulfiqar Malik	MSTP, U Iowa	BA	1996-1997	Co-stimulatory molecule expression in M tuberculosis-infected macrophages	Immunology Graduate Training Program, Recipient U Iowa Pulmonary Diseases Training grant	Hematologist Oncologist, Kentucky
Joy Crowther	Graduate Student, Immunology, U Iowa (PhD awarded 2005)	BA	1999-2005	Surfactant protein regulation of macrophage function		Post-doc, Dr. L. Kobzik, Harvard Medical School Scientist II, Nektar Therapeutics
Travis McCarthy	Graduate Student, Microbiology, U Iowa (PhD awarded 2006)	BA	2000-2006	Biosynthesis of mycobacterial glycoconjugates		Post-doctoral researcher, Dr. T. Zahrt, Medical College of Wisconsin Biosafety Official, U Missouri
Lisa Henning	Graduate Student, IBGP, OSU (PhD awarded 2008)	BA	2003-2008	Surfactant protein A and macrophage biology		Research Scientist, Battelle Memorial Institute, Principal Research Scientist 2011

Name	Role	Degree at Entry	Training Period	Research Topic	Awards/Honors	Current Position
Corey Clay	Medical Scientist Student, OSU (PhD awarded 2009)	MS	2004-2009	Francisella and complement	OSU University Fellowship 2008 Presidential Fellowship	Medical Student, OSU, Internal Medicine Resident, Clinical Sciences Track, U Cinn
Tracy Carlson, DVM	Graduate Student, Dept. Vet Biosci, OSU	DVM	2005-2011	Tuberculosis and surfactants	T32 training grant recipient NIH K01 recipient 2009 Presidential Fellowship	Post-doctoral Researcher, OSU 2011-2012; Research Scientist II, Baxter
Michelle Brooks	Graduate Student, Microbiology, OSU	BS	2006-2011	NODs in <i>M.tb</i> -macrophage interactions	NSF training grant recipient NIH National Graduate Student Research Festival 2011 T32 training grant recipient	Post-doctoral researcher, CDC Emerging Infectious Diseases Fellowship Program, Adjunct Lecturer University of Maryland College of Medicine-Germany
Tracy Keiser	Graduate Student, Microbiology, OSU	BS	2007-2014	<i>M.tb</i> cell wall carbohydrate synthetic enzymes		Post-doctoral researcher, Larry Schlesinger. Post-doctoral researcher William Jacobs, Albert Einstein College of Medicine
Bin Ni	MSTP Student, OSU	BS	2010-2014	MicroRNAs and tuberculosis	2011 Deans Distinguished University Fellowship CMIB T32 training grant	Medical student
Charles Pyle	Graduate student, Dept. Pharmacy Practice, OSU	PharmD	2010-2016	Macrophage zinc receptors and tuberculosis	T32 Training grant recipient	Post-doc Knoell/Schlesinger Post-doc David Tobin, Duke
Biruhalem Taye Beyene (co-advisor with Dr. Gobena Ameni)	Graduate student and lecturer, Tropical and Infectious Diseases, Akililu Lemma Institute of Pathobiology, College of Health Science, Addis Ababa University		2011-2013	Molecular epidemiology of tuberculosis		Changed to a different PhD training program in Africa.
Danielle House	Graduate student, BSGP, OSU	BS	2012-2014	Immunoregulation of macrophages by surfactant and TB	HHMI Med to Grad Program	Masters in Biomedical Sciences. Clinical Research Coordinator, OSU.
Claire Dodd	Graduate Student, Microbiology, OSU	BA	2013-2017	Immunoregulation of macrophages by zinc, surfactant, PPAR-gamma and TB	HHMI Med to Grad Program	Post-doc Jeffrey Cox, UC Berkeley
Jiae Kim	Graduate student, Mathematics, OSU (co-Advisor)	BS, MS	2013-2015	SP-A/SP-D control of macrophage infection by <i>M.tb</i>		Masters in Mathematical Science
David Clever	MSTP Student, OSU (co-advisor)	BC	2015-2016	Oxygen sensing regulation of T cell function	NIH Ox/CAM program	Medical student
John Henry	Masters student, Mathematics, OSU (co-advisor)	BS	2015-2016	Modeling of MCP-1 in TB pathogenesis		PhD student, Texas A&M

### PhD and Masters Advisory Committees

- Joel A. Bozue, PhD candidate, Dept Microbiology, U Iowa (PhD awarded 1995)
- Endang Purwantini, PhD candidate, Dept Microbiology, U Iowa (PhD awarded 1997)
- Frank Lee, PhD candidate, Dept Microbiology, U Iowa (PhD awarded 1998)
- Paul Jones, PhD candidate, Dept Microbiology, U Iowa (PhD awarded 2001)
- Debra Post, PhD candidate, Dept Microbiology, U Iowa (Ph. D. awarded 2001)
- Paul Ogg, PhD candidate, Molecular Biology, U Iowa (PhD awarded 2004)
- Janet Hume, PhD candidate, Dept Microbiology, U Iowa (PhD awarded 2004)
- Ruma Pengal, PhD candidate, Mol Cell and Developmental Biology Program, OSU (PhD awarded 2005)
- Chris Premanandan DVM, PhD candidate, Dept. Veterinary Biosciences, OSU (PhD awarded 2007)
- Phillip Horne, MD PhD candidate, Medical Scientist Program, OSU (PhD awarded 2007)
- Amanda Matovich, Masters candidate, Integrated Biomedical Sciences Graduate Program (IBGP), OSU (Masters awarded 2007)
- Aaron P. Kithcart, PhD candidate, IBGP/MSP, OSU (PhD awarded 2009)
- Erin Rottinghaus, PhD candidate, IBGP, OSU (PhD awarded 2009)
- Gillian L. Beamer VMD, PhD candidate, Dept. Veterinary Biosciences, OSU (PhD awarded 2009)
- Amanda Beltramini, PhD candidate, IBGP, OSU (PhD awarded 2009)
- Brian Bell, PhD candidate, IBGP, OSU (PhD awarded 2009)
- Robert Crawford, PhD candidate, IBGP, OSU (PhD awarded 2009)
- Mary Carsillo DVM, PhD candidate, Dept. of Veterinary Biosciences, OSU (PhD awarded 2009)
- David Schonberg, PhD candidate, NGSP, OSU (PhD awarded 2009)
- Mindy Dunn, PhD candidate, IBGP, OSU (PhD awarded 2010)
- Thomas Cremer, PhD candidate, MCDB program, OSU (PhD awarded 2010)
- Laura Novotny, Masters candidate, Dept MVIMG, OSU (Masters awarded 2011)
- Alan Smith, PhD candidate, IBGP/MSP, OSU (PhD awarded 2011)
- Dennis Horvath, PhD candidate, IBGP, OSU (PhD awarded 2011)
- Patrick Grierson, PhD candidate, IBGP/MSP, OSU (also Physician-Scientist mentor) (PhD awarded 2012)
- Joshua Cyktor, PhD candidate, IBGP, OSU (PhD awarded 2012)
- Carolyn Marion, PhD candidate, IBGP, OSU (PhD awarded 2012)
- Darren Lucas, PhD candidate, Dept Microbiology, OSU (PhD awarded 2013)
- Stephen Vadia, PhD candidate, Dept Microbiology, OSU (PhD awarded 2013)
- Eusondia Arnett, PhD candidate, Dept Microbiology, OSU (PhD awarded 2013)
- Aaron R. Navratil, PhD candidate, Dept. Microbiology and Immunology, LSU Health Sciences Center – Shreveport (served as External Reviewer)
- Dominique Limoli, PhD candidate, IBGP, OSU (PhD awarded 2014)
- Megan Miller, PhD candidate, Dept Microbiology, OSU (PhD awarded 2014)
- Devyn D. Gillette, PhD candidate, IBGP, OSU (PhD awarded 2013)
- Cynthia Wu, PhD candidate, IBGP, OSU (PhD awarded 2016)
- Christian Harding, PhD candidate, IBGP, OSU (PhD awarded 2015)
- David Clever, PhD candidate, BSGP/MSTP, OSU (PhD awarded 2016)
- Mohini Bhattacharya, PhD candidate, Dept. Microbiology, OSU
- Heather Eggleston, PhD candidate, BSGP, OSU (Masters awarded)
- Nicole Zalles, PhD candidate, BSGP/MSTP, OSU
- Colwyn Headley, PhD candidate, BSGP, OSU
- Christopher Bobba, PhD candidate, BME/MSTP, OSU
- Russell Ault, PhD candidate, BSGP-MSTP, OSU
- Kavin Fatehchand, PhD candidate, BSGP-MSTP, OSU
- Lelia Lavalett Oñate (visiting PhD student; Biotecnología; Universidad Nacional de Colombia Sede Medellín, Columbia, 2016)

### Undergraduate Students (partial updates)

#### Past:

- Laura Marchiando (U Iowa, Medical student, U Iowa)

- Jeremy Weis (U Iowa)
- Beth Kutzbach (U Iowa; Medical student, U Iowa, 2001; Residency U Minn; Ophthalmology fellowship Mayo Clinic; Assistant Professor, U Iowa)
- Emily Stein (Iowa, Graduate student in Microbiology, Berkeley, Post-doc Berkeley, Stanford; Research Director Sevident)
- Jessica MacNeil (U Iowa, Masters student in Public Health, U. of Michigan)
- Jennifer Ufnar (U Iowa, Masters student in Education, U. of Iowa)
- Eric Tibesar (Research Assistant, Medical student, U Iowa, Res Peds, Mayo)
- Whitney Milligan (U Iowa, Medical Student, U Iowa)
- Heba Iskandar (Augustana College, ID summer research student U Iowa; medical student, Wash U.)
- Clinical Mentor, 2001 SUMR (Summer Undergraduate MSTP Research, U Iowa)
- Matt Graham (OSU)
- Liza Young (Yale, Medical student OSU)
- Sirri Banda (OSU; Masters in Nursing OSU)
- Shannon Brouman (OSU)
- Katherine Rose Knaup (Research Assistant, OSU)
- Augustine Hong (OSU)
- Tejal Patel (DO student, Ohio University)
- Bret Betz (Research Assistant, OSU; medical student OSU)
- Cassie Cotton (OSU; Undergraduate Colorado State University; Pharmacy School, Cassie Musick)
- Nirali Patel (OSU)
- Adrienne Strong (OSU; Fulbright Scholar, PhD program, Wash U; Graduate student Anthropology Wash U.)
- Rebecca Reeder (OSU; Cancer genetics program; MS program in Genetic Counseling, U Minn.)
- Nina Osafo (OSU)
- Rob Bonacci (OSU; summer internship Harvard 2009; Fulbright Scholar; Medical Student U Penn)
- Huy Nguyen (OSU; summer internship Case Western Reserve 2009; Medical DO Student Ohio University)
- Viral Patel (OSU; Research Assistant CMIB OSU; Masters in Medical Economics, Johns Hopkins; Medical Student Case Western Reserve University)
- Dorothy Ly (OSU)
- Tejas Sinha (Medical Student OSU)
- David Karp (OSU BMS)
- Mike Hegarty (research assistant OSU; Georgetown Special Master's Program in Physiology)
- Joanna Daigle (OSU; Presidential Scholar; PhD program, U Saskatchewan)
- Alaric D'Souza (Yale University; SUCCESS student)
- Sasha Adamovich (OSU; PhD program, BSGP, OSU)
- Audrey Ynigez-Gutierrez (UT San Antonio; SUCCESS student; MARC)
- Chelsea Torres (OSU BMS)
- Uchenna Mbawuike, OSU Discovery Prep program (NIH funded) – Post-Bacc. 2011-2014 (NIH Diversity Supplement; PhD Student, University of Pittsburgh)
- Ian Oglesby (OSU)
- Hannah Harris (BMS, OSU)
- Becca Glowinski (SUCCESS, Johns Hopkins U)
- Jenny Hoang (SUCCESS Program, OSU)
- Joshua Keaton (Microbiology and Biochemistry, OSU; grad student U Washington)
- Anjali Doshi (BMS, Eminence Scholar Mentor)
- Abigail Gerberick (Microbiology, OSU)
- Ashlee Weaver (Microbiology, OSU, Medical Student OSU)
- Kiersten Woodyard (Neuroscience, OSU)
- Sumiran Mehta (Microbiology, OSU)

Current:

- Leonardo Aguilar (Microbiology, UTSA)

**Publications–Peer-reviewed**

1. **Schlesinger LS**, Ross SC, Schaberg D. *Staphylococcus aureus* meningitis: A broad-based epidemiologic study. *Medicine*, 66:148-156, 1987.
2. **Schlesinger LS**, Horwitz MA. Complement receptors and complement component C3 mediate phagocytosis of *Mycobacterium tuberculosis* and *Mycobacterium leprae*. *Int. J. Lep. Other Mycobact. Dis.*, 58:200-201, 1990.
3. **Schlesinger LS**, Bellinger-Kawahara CG, Payne NR, Horwitz MA. Phagocytosis of *Mycobacterium tuberculosis* is mediated by human monocyte complement receptors and complement component C3. *J. Immunol.*, 144:2771-2780, 1990.
4. **Schlesinger LS**, Horwitz MA. Phagocytosis of leprosy bacilli is mediated by complement receptors CR1 and CR3 on human monocytes and complement component C3 in serum. *J. Clin. Invest.*, 85:1304-1314, 1990. PMID: PMC296567.
5. **Schlesinger LS**, Horwitz MA. Phagocytosis of *Mycobacterium leprae* by human monocyte-derived macrophages is mediated by complement receptors CR1(CD35), CR3(CD11b/CD18), and CR4(CD11c/CD18) and interferon gamma activation inhibits complement receptor function and phagocytosis of this bacterium. *J. Immunol.*, 147:1983-1994, 1991.
6. **Schlesinger LS**, Horwitz MA. Host and bacterial molecules mediating phagocytosis of *Mycobacterium leprae* by human mononuclear phagocytes. *Int. J. Lepr. Other Mycobact. Dis.*, 59:719-721, 1992. PMID: PMC2118995.
7. **Schlesinger LS**, Horwitz MA. Phenolic glycolipid-1 of *Mycobacterium leprae* binds complement component C3 in serum and mediates phagocytosis by human monocytes. *J. Exp. Med.*, 174:1031-1037, 1991. PMID: PMC2118995.
8. Hornick DB, **Schlesinger LS**, Wenzel RP. Resurgence of tuberculosis: update 1992. *Iowa Med.*, Oct.:411-414, 1992.
9. **Schlesinger LS**. Macrophage phagocytosis of virulent but not attenuated strains of *Mycobacterium tuberculosis* is mediated by mannose receptors in addition to complement receptors. *J. Immunol.*, 150:2920-2930, 1993.
10. **Schlesinger LS**, Horwitz MA. A role for natural antibody in the pathogenesis of leprosy: Antibody in nonimmune serum mediates C3 fixation to the *Mycobacterium leprae* surface and hence phagocytosis by human mononuclear phagocytes. *Infect Immun.*, 62:280-289, 1994. PMID: PMC186098.
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12. **Schlesinger LS**, Hull SR, Kaufman TM. Binding of the terminal mannosyl units of lipoarabinomannan from a virulent strain of *Mycobacterium tuberculosis* to human macrophages. *J. Immunol.*, 152:4070-4079, 1994.
13. **Schlesinger LS**, Helms CM. We must ensure the quality of clinical training during health care reform. *Acad. Med.*, 70:561-562, 1995.
14. Gaynor CD, McCormack FX, Voelker D, McGowan SE, **Schlesinger LS**. Pulmonary surfactant protein A mediates enhanced phagocytosis of *Mycobacterium tuberculosis* by a direct interaction with human macrophages. *J. Immunol.*, 155:5343-5351, 1995.
15. Kusner DJ, Hall CF, **Schlesinger LS**. Activation of phospholipase D is tightly coupled to the phagocytosis of *Mycobacterium tuberculosis* by human macrophages. *J. Exp. Med.*, 184:585-595, 1996. PMID: PMC2192724.
16. **Schlesinger LS**, Kaufman TM, Iyer S., Hull SR, Marchiando L. Differences in mannose receptor-mediated uptake of lipoarabinomannan from virulent and attenuated strains of *M. tuberculosis* by human macrophages. *J. Immunol.*, 157:4568-4575, 1996.
17. **Schlesinger LS**. Role of mononuclear phagocytes in *M. tuberculosis* pathogenesis. *J. Invest. Med.*, 44:312-323, 1996.
18. Ferguson JS, Gaynor CD, **Schlesinger LS**. Mononuclear phagocytes in tuberculosis pathogenesis. *Curr. Opin. Infect. Dis.* 10:190-195, 1997.
19. **Schlesinger LS**. *Mycobacterium tuberculosis* and the complement system. *Trends Microbiol.*, 6:47-49, 1998.
20. Kang BK, **Schlesinger LS**. Characterization of mannose receptor-dependent phagocytosis mediated by *M. tuberculosis* lipoarabinomannan. *Infect. Immun.*, 66:2769-2777, 1998. PMID: PMC108268
21. Alisky JM, **Schlesinger LS**. Isolated cavitary pulmonary *Mycobacterium avium* intracellulare infection in a patient with acquired immune deficiency syndrome. *Clin. Infect. Dis.*, 27:1542-1543, 1998.
22. George S., **Schlesinger LS**. *Mycobacterium neoaurum*: An unusual cause of infection of vascular catheters. Case report and review of the literature. *Clin. Infect. Dis.*, 28:682-683, 1999.

23. Ferguson JS, Voelker DR, McCormack FX, **Schlesinger LS**. Surfactant protein D binds to *Mycobacterium tuberculosis* bacilli and lipoarabinomannan via carbohydrate-lectin interactions resulting in reduced adherence of bacteria by macrophages. *J. Immunol.*, 163:312-321, 1999.
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26. Razavi B, Hornick D, **Schlesinger L**, Goodrich J. Longitudinal data on positive tuberculin skin tests from three US states. *Chest* 117:608, 2000.
27. DesJardin LE, **Schlesinger LS**. Identifying *Mycobacterium tuberculosis* virulence determinants - New technologies for a difficult problem. *Trends Microbiol.*, 8:97-99, 2000.
28. Ferguson JS, **Schlesinger LS**. Pulmonary surfactant in innate immunity and the pathogenesis of tuberculosis. *Tubercle and Lung Disease*, 80:173-184, 2000.
29. Olakanmi O, Britigan BE, **Schlesinger LS**. Gallium disrupts the iron metabolism of mycobacteria residing within human macrophages. *Infect. Immun.*, 68(10):5619-5627, 2000. PMCID: PMC101514
30. Sigurdson ST, Field FJ, **Schlesinger LS**. Esophageal Tuberculosis: A rare but not to be forgotten entity. *Am. J. Med.* 110(5):415-416, 2001.
31. Ferguson JS, Voelker DR, Ufnar JA, and **Schlesinger LS**. Surfactant protein D inhibition of human macrophage uptake of *Mycobacterium tuberculosis* is independent of bacterial agglutination. *J. Immunol.*, 168:1309-1314, 2002.
32. Razavi B, Lund B, Allen BL, **Schlesinger L**. Failure of Trimethoprim/sulfamethoxazole prophylaxis for *Pneumocystis carinii* pneumonia with concurrent leucovorin use. *Infection* 30:41-42, 2002.
33. Mansour MK, **Schlesinger LS**, and Levitz SM. Optimal T-cell responses to *Cryptococcus neoformans* mannoprotein are dependent on recognition of conjugated carbohydrates by mannose receptors. *J. Immunol.*, 168:2872-2879, 2002.
34. Beharka AA, Gaynor CD, Kang, BK, McCormack FX, Voelker DR, **Schlesinger LS**. Pulmonary surfactant protein A upregulates activity of the mannose receptor, a pattern recognition receptor expressed on human macrophages. *J. Immunol.*, 169:3565-3573, 2002.
35. DesJardin LE, Kaufman TM, Potts B, Kutzbach B, Yi H, **Schlesinger LS**. *M. tuberculosis*-infected human macrophages exhibit enhanced cellular adhesion with increased expression of LFA-1 and ICAM-1 and reduced expression and/or function of complement receptors, Fc $\gamma$ RII and the mannose receptor. *Microbiology* 148:3161-3171, 2002.
36. Olakanmi O, **Schlesinger LS**, Ahmed A, Britigan BE. Intrapagosomal *Mycobacterium tuberculosis* acquires iron from both extracellular transferrin and intracellular iron pools: impact of interferon- $\gamma$  and hemochromatosis *J Biol Chem* 277:49727-49734, 2002.
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41. Beharka AA, Crowther JE, McCormack FX, Denning G, Lees J, Tibesar E, **Schlesinger LS**. Pulmonary Surfactant Protein A activates a PI3 Kinase / calcium signal transduction pathway in human macrophages: participation in the up-regulation of mannose receptor activity. *J. Immunol.* 175: 2227-2236, 2005.
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46. Torrelles JB, Azad AK, **Schlesinger LS**. Fine discrimination in the recognition of individual species of phosphatidyl-myo-inositol mannosides from *Mycobacterium tuberculosis* by C-type lectin pattern recognition receptors. *J. Immunol.* 177:1805-1816, 2006. PMID: n/a.
47. Parsa KVL, Ganesan LP, Rajaram MVS, Gavrilin MA, Wewers MD, **Schlesinger LS**, Gunn JS, Tridandapani S. Macrophage pro-inflammatory response to *Francisella novicida* infection is regulated by the SH2 domain-containing inositol 5' phosphatase SHIP. *PLOS Pathogens* 2:0681-0690, 2006. PMID: PMC1594866.
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49. Ferguson JS, Martin JL, Azad AK, McCarthy TR, Kang PB, Voelker DR, Crouch EC, and **Schlesinger LS**. Surfactant Protein D Increases fusion of *Mycobacterium tuberculosis*-containing phagosomes with lysosomes in human macrophages. *Infect. Immun.* 74:7005-7009, 2006. PMID: PMC1698096
50. **Schlesinger LS**. Role of *M. tuberculosis* cell wall carbohydrates in host adaptation. *Glycobiology* 16:1111, 2006.
51. Olakanmi O, **Schlesinger LS**, and Britigan BE. Hereditary hemochromatosis results in decreased iron acquisition and growth by *Mycobacterium tuberculosis* within human macrophages. *J Leuko Bio* 81:195-204, 2007.
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53. Young JD, Balagopal A, Reddy NS, **Schlesinger LS**. Pulmonary infections caused by non-tuberculous mycobacteria: An update on epidemiology, diagnosis, and treatment. *J. Resp. Dis* 28: 7-18, 2007.
54. Butchar JP, Rajaram MVS, Ganesan LP, Parsa KVL, Clay CD, **Schlesinger LS**, Tridandapani S. *Francisella tularensis* induces IL-23 production in human monocytes. *J. Immunol.* 178:4445-4454, 2007.
55. Torrelles JB, Knaup R, Kolareth A, Slepishkina T, Kaufman TM, Kang P, Hill PJ, Brennan PJ, Chatterjee D, Belisle JT, Musser JM, **Schlesinger LS**. Heterogeneity of cell wall carbohydrates and lipids from clinical isolates of *Mycobacterium tuberculosis*: Impact on interactions with the human host. *Glycobiology* 17:1224, 2007.
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66. Azad AK, Torrelles JB, **Schlesinger LS**. Mutation in the DC-SIGN cytoplasmic triacidic cluster motif markedly attenuates receptor activity for both phagocytosis and endocytosis of mannose-containing ligands by human myeloid cells. *J. Leuko. Bio.* 84:1594-1603, 2008. PMID: PMC2614595.
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68. Lustberg M, **Schlesinger LS**, Mangino J. Concerns regarding "Complicated Skin and Skin-Structure Infections and Catheter-Related Bloodstream Infections: Noninferiority of Linezolid in a Phase 3 Study". Letter to the editor. *Clin Infect Dis.* 49:313-314, 2009. PMID: n/a.
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11. Dysfunctional immunity in type 2 diabetes mellitus patients and its relationship to a higher susceptibility to TB. Restrepo BI, **Schlesinger LS.** In: Pulmonary Tuberculosis and diabetes mellitus. Liang, Xiaohui, Harries (eds). People's Medical Publishing House Publisher. (submitted).
12. Host Pathogen Biology for Airborne *Mycobacterium tuberculosis*: Cellular and Molecular Events in the Lung. Arnett E, Krishnan N, Robertson BD, **Schlesinger LS.** In: Drug Delivery Systems for Tuberculosis Prevention and Treatment. Advances in Pharmaceutical Technology Series. Eds. Hickey AJ, Misra A, Fourie PB. John Wiley and Sons, Ltd. In press.
13. Innate responses to tuberculosis. Jeffrey Schorey and **Larry Schlesinger.** In: Tuberculosis. McShane, Orme, eds. American Society for Microbiology Press. Microl. Spectrum. 4(6), 2016.

## Publications–Abstracts ~210

### Current Funding

<u>Title</u>	<u>Period</u>
NIH NIA P01 "Exploring the impact of inflammaging on immune function during <i>M.tb</i> infection PI: J Turner Project 1 Co-I: "Biology of the human lung mucosa in aging and tuberculosis" Project 2 PI: "Biology of alveolar macrophages in aging and tuberculosis"	2016-2021
NIH NIAID R01 "Regulation of innate immune system sensing of <i>C. albicans</i> infection" PI: Jian Zhang. (Co-I).	2016-2021
NIH/NHLBI R01 "The role of microRNA-calibrated autophagy in innate immunity and inflammation". MPI: Amer/Cornet-Boyaka. (Co-I)	2015-2019
NIH NIAID R01 "TB and innate immune regulation of lung macrophages" (PI)	2012-2017
NIH R21/R33 "Celecoxib Derivative: Host Cell-Directed Inhibitors of Intracellular Pathogens" PI: K Ainslie. (Co-I)	2012-2017
NIH NIAID R01 Altered immune-endocrine axis in type 2 diabetes and tuberculosis risk MPI: Ronacher/Restrepo (Co-I)	2015-2020

Bill and Melinda Gates Foundation. Alveolar macrophage immunobiology and functional genomics: Unlocking human to human variation in host response to <i>M. tuberculosis</i> . (PI)	2015-2018
NIH NIGMS K08 "Burkholderia-mediated defective killing mechanisms in macrophages from cystic fibrosis (CF) patients" Co-Mentor	2015-2019

### Pending Funding

<u>Title</u>	<u>Period</u>
NIH NIAID R21 "Host factors inducing selection and persistence of <i>Mycobacterium abscessus</i> " (Co-I)	2017-2019
NIH NIAID R01 "Dysbiosis promotes lipid perturbations, immune activation and vascular inflammation in HIV infection" (Co-I)	2017-2021
NIH NHLBI R01 "Macrophage nuclear receptors, metabolism and immune effectors during health and <i>M. tuberculosis</i> infection" PI	2018-2023
NIH NIAID R21 "The surfactant lipid laden alveolar macrophage and tuberculosis" PI	2018-2020

### History of Funding

<u>Title</u>	<u>Period</u>
AHA Investigator award "Role of miR155 and HSF-1 on cardiac inflammation and dysfunction in sepsis". PI: Rajaram (Co-I, left institution)	2017-2018
NIH NIGMS K23 "The Impact of Zinc on Innate Immunity and Patient Safety in Sepsis" Mentor	2013-2017
OSU L-Track Pilot Program Grant The Center for Clinical & Translational Science A Systems Biology Approach to Advance the Understanding and Treatment of Patients with Chronic Granulomatous Diseases Using a Novel Ex Vivo Human Model. PI	2014-2017
NIH NIGMS T32 "Medical Scientist Training Program – Ohio State University" (PI until left OSU 2017)	2016-2021
NIH NIAID T32 "Interdisciplinary Program in Microbe-Host Biology" (MPI) (PI until left OSU 2017)	2014-2019
NIH NIAID R01 HL094586 "Role of caspases in <i>Legionella pneumophila</i> pulmonary infection" PI: Amer. (Co-I)	2009-2016
ARNO Industry Contract ARNO Therapeutics <i>Center for Microbial Interface Biology infectious diseases AR-12 drug discovery program collaboration with ARNO Therapeutics</i> PI	2013-2016
NIH NIGMS T32 GM075787 "Medical Scientist Training Program – Ohio State University" (PI)	2011-2016
Navidea Biopharmaceuticals Industry Tilmanocept for diagnosis and therapy of inflammatory diseases PI	2013-2015
Harrington-Scholar Innovator Grant "Anti-TB drug discovery through lead optimization of the protein kinase inhibitor OSU-03012"	2012-2015
NIH NIAID U54 AI057153 Great Lakes RCE for Biodefense and Emerging Infectious Disease Research "Host and bacterial targets mediating immune suppression in pneumonic tularemia" PI: Olaf Schneewind. (PI, program project)	2009-2015
OSU PHPID Strategic Area Grant "Anti-tuberculosis drug discovery through lead optimization"	2012-2014

of the protein kinase inhibitor OSU-03012

NIH NIAID T32 AI065411 "Interdisciplinary study of the microbe-host interface" (PI)	2007-2013
Neoprobe Industry contract "Binding interactions of Lymphoseek® to human macrophages" (PI)	2010-2013
HHMI Med to Grad Fellowship "Surfactant Contributes to the Plasticity and Unique Biology of Macrophages" PI: Danielle House. (Mentor)	2012-2013
NIH NCRR UL1RR025755 "Clinical and Translational Science Award" PI: Rebecca Jackson (Co-Director, Post-doctoral Education)	2008-2013
NIH NCRR K01 RR025389 "Pulmonary innate immunity and pathogens of the order Actinomycetales" PI: Tracy Carlson. (Mentor)	2010-2013
NIH NIAID R00 AI073856 "Remodeling of the <i>M. tuberculosis</i> cell wall by the host microenvironment" PI: Jordi Torrelles. (Mentor)	2008-2012
ALA Fellowship "Emerging drug targets in tuberculosis: biosynthetic enzymes for cell envelope mannose-containing lipoglycans" PI: Evelyn Guirado. (Mentor)	2010-2012
NIH NIAID R01 AI052458 "Altered <i>M. tuberculosis</i> Mannosylation and the Macrophage" (PI)	2006-2011
Parker B Francis Fellowship "Influence of the human lung hydrolases on Mycobacterium tuberculosis infection" PI: Jordi Torrelles. (Mentor)	2008-2011
NIH NCRR S10 RR025660 "Acquisition of a MALDI-TOF/TOF MS for Glycomic and Lipidomic Research" (PI)	2010-2011
NIAID T32 "Nucleotide binding oligomerization domain 2 (NOD2) plays a role in the nature of the inflammatory response" PI: Michelle Brooks. (Mentor)	2010-2011
NIH NIAID K08 "Chemokines and their receptors in the pathogenesis of tuberculosis" PI: Gillian Beamer. (Mentor)	2007-2011
NSF "Nucleotide binding oligomerization domain 2 (NOD2) plays a role in the nature of the inflammatory response" PI: Michelle Brooks. (Mentor)	2007-2010
NIH NIAID R01 AI059639 "TB and innate immune regulation of lung macrophages" (PI)	2005-2010
NIH NIAID R21 AI076309 "Isolation of novel antileishmanial molecules from <i>Pentalinon andrieuxii</i> root" PI: Abhay Satoskar. (Co-I)	2008-2010
NIH NIAID R21 AI068846 " <i>Mycobacterium tuberculosis</i> lipoarabinomannan metabolism within human macrophages" (PI)	2007-2010
US EPA CR-83278701 "Virulence of <i>Mycobacterium avium</i> Complex Bacteria from Drinking water" (PI)	2005-2010
NIH NIAID U54 AI057153 Great Lakes RCE for Biodefense and Emerging Infectious Disease Research (Olaf Schneewind, PI) Research Project "Lung innate immune responses to <i>F. tularensis</i> : a central role for the macrophage" (PI)	2006-2009
Biothera Industry Contract "The effect of $\beta$ -glucan preparations from Biothera on the biology of human mononuclear phagocytes" (PI)	2006-2008
PhageVax Industry contract "Development of a bacteriophage lambda delivery system as a vaccine candidate against intracellular bacterial pathogens" (John Gunn PI)	2007-2008
NIH NIAID Planning-Regional Centers of Excellence in Bioterrorism "Transmission/Pathogenesis of Bioterrorism Agents" (Co-Investigator, Patrick Schlievert, PI) R01 project "Tularemia and Lung Innate Immunity" (PI)	2003-2006
NIH NIAID R21 "TB and innate immune regulation of lung macrophages" (PI)	2004-2005
NIAID, NIH, R01: "Macrophage Complement Receptors in Tuberculosis" (PI)	1998-2004

(extension 2004)

NIH R21 "Altered <i>M. tuberculosis</i> Mannosylation and the Macrophage" (PI)	2003-2004
Subcontract LigoCyte Pharm	2002-2004
Co-investigator (PI Lee-Ann Allen) NIH R01: "Interaction of <i>Helicobacter pylori</i> with Phagocytes"	2000-2004
VA Merit Review "Tuberculosis and Macrophage Lectin Biology" (PI)	2002-2003
Co-PI, DARPA Grant: "Activation of Innate Immunity by CPG DNA for Broad Spectrum Protection against Pathogens"	1999-2002
Department of Veterans Affairs, Merit Review Grant "Tuberculosis and Macrophage Lectin Biology" (PI)	1998-2002
NIH R03: "Gallium Therapy for Mycobacterial Infections" (PI)	10/1998-9/2001
NIH R01, Co-PI: "Coenzyme F420 Biosynthesis in <i>Mycobacterium</i> " (Lacy Daniels, PI)	6/1998-5/2001
CDC: "Characterization of Bacterial Factors Affecting the Transmission of <i>Mycobacterium tuberculosis</i> " (PI)	10/1997-9/1999
Qiagen, ResPRO: "Development of Therapeutic Oligonucleotides: Purification of Human Macrophage Populations for Identification of Functional DNA Motifs" (Project 8) (PI)	6/1996-2/1998
Department of Veterans Affairs, VA Merit Review: "Biology of Tuberculosis and Macrophage Membrane Receptors" (PI)	10/1993-9/1997
NIH R01: "Surfactant Proteins in the Pathogenesis of Tuberculosis" (PI)	10/1993-8/1999
NIH First Award: "Macrophage Complement Receptors in Tuberculosis" (PI)	10/1992-8/1998
American Lung Association: "Tuberculosis-Macrophage Biology" (PI)	7/1992-6/1993
Department of Veterans Affairs, RAG: "Biology of Tuberculosis and Macrophage Membrane Receptors" (PI)	4/1992-9/1993
College of Medicine: "Influence of the Human Complements System in <i>Mycobacterium tuberculosis</i> Mononuclear Phagocyte Interactions" (PI)	10/1991-9/1992
NIH, NRSA: "Human Monocyte Interactions with <i>Mycobacterium leprae</i> " (PI)	7/1989-2/1992
Heiser Program for Research on leprosy and Tuberculosis, fellowship (PI)	1988

## Patents

1. U.S. Patent Application Serial No. 08/707,248 titled "Gallium-containing Compounds for the Treatment of Infections Caused by Intracellular Pathogens and Pathogens Causing Chronic Pulmonary Infection", filed on September 3, 1996, by Dr. Larry Schlesinger and Dr. Bradley Britigan, assigned to the University of Iowa Research Foundation. U.S. Patent Number 6,203,822, issued March 20, 2001. Foreign PCT application filed September 2, 1997.
2. U.S. Patent Application Serial No. 08/960,847 titled "Method for Inhibiting Growth of *P. aeruginosa* using Gallium-containing Compounds", filed on October 30, 1997, by Dr. Larry Schlesinger and Dr. Bradley Britigan. U.S. Patent Number 5,997,912 issued December 7, 1999.
3. U.S. Patent Application Serial No. 60/233,353 titled "Methods for Treating Human Immunodeficiency Virus Infections with Gallium Compositions", provisional patent pending, filed on September 18, 2000, by Dr. Jack Stapleton, Dr. Larry Schlesinger, and Dr. Bradley Britigan, assigned to the University of Iowa Research Foundation; Serial No. 09/954,975 filed September 18, 2001.
4. U.S. Patent Application Serial No. 12/428,035 titled "Anti-Francisella Agents", filed on April 22, 2009 by Dr. Ching-Shih Chen, Dr. Hao-Chieh Chiu, Dr. Samuel Kulp, Dr. John Gunn, Dr. Larry Schlesinger, assigned to The Ohio State University.
5. U.S. Patent Application Serial No. 12/179,134 titled "Anti-Infective Agents Against Intracellular Pathogens", filed on July 24, 2008 by Dr. Ching-Shih Chen, Dr. Hao-Chieh Chiu, Dr. Dasheng Wang, Dr. John Gunn,

- and Dr. Larry Schlesinger, assigned to The Ohio State University, issued September 12, 2011. US Patent No. 8,039,502, issued on October 18, 2011.
6. Antibacterial Protein Kinase inhibitors, PCT/US2013/052706, Filed July 30, 2013. Ching-Shih Chen, Abul Azad, Santosh Salunke, Larry Schlesinger. Antibacterial Protein Kinase inhibitors, 61/820,956, Filed May 8, 2013. US Patent Application Serial No. 14/418,250 filed January 29, 2015. US Patent No. 9,457,031 issued October 4, 2016.
  7. Development of Novel anti-Tuberculosis (anti-TB) Agents, OSU Provisional Patent, 61/677,255, Filed July 30, 2012.
  8. An in vitro human granuloma model, a new tuberculosis biomarker for therapies and vaccines, OSU Provisional Patent, 61/890,900, Filed October 15, 2013.
  9. Compositions, methods and kits for diagnosing and treating CD206 expressing cell-related disorders, by Frederick O. Cope, Michael S. Blue, Wendy L. Metz, Larry S. Schlesinger, submitted US Patent Application, #14338332, Filed July 22, 2014.
  10. Compositions, methods and kits for diagnosing and treating CD206 expressing cell-related disorders, by Frederick O. Cope, Michael S. Blue, Wendy L. Metz, Larry S. Schlesinger, submitted PCT/US14/47708, Filed July 22, 2014. Pub. No. US 2015/0023876 A1; Pub. Date: January 22, 2015.
  11. Characterization of Host and Microbial Determinants in Individuals with Latent Tuberculosis Infection Using a Human Granuloma Model, by Larry S. Schlesinger, Evelina Guirado-Caceres, submitted U.S. Provisional Patent Application Serial No. 62/105,991; filed January 21, 2015.
  12. Compositions and methods for inhibiting viral infection, by Larry S. Schlesinger, Jacob Yount, submitted U.S. Provisional Patent Application Serial No. 62/108,960; filed January 28, 2015.
  13. "COMPOSITIONS AND METHODS FOR INHIBITING THE GROWTH OF MULTI-DRUG RESISTANT MICROBES". Filing of U.S. Utility Patent Application based on Filing of U.S. Provisional Patent Application 62/195,335 on July 22, 2015 (Our Reference 2242-00-004P01). PCT submitted July 20, 2016 (Applicarion # 15/214,781). Published January 26, 2017: US-2017-0020846-A1.

#### Invited Presentations–International

1. "Complement receptors and complement component C3 mediates phagocytosis of *Mycobacterium tuberculosis* and *Mycobacterium leprae*". Twenty-Fourth U.S.-Japan International Joint Conference on Leprosy and Tuberculosis in San Diego, CA, August 23-25, 1989.
2. "Host and bacterial molecules mediating phagocytosis of *Mycobacterium leprae* by human mononuclear phagocytes". Twenty-Sixth U.S.-Japan International Joint Conference on Leprosy and Tuberculosis in Seattle, WA, August, 1991.
3. "Phagocytosis of *M. tuberculosis* by human mononuclear phagocytes: The interaction between lipoarabinomannan and macrophage mannose receptors". Twenty-Eighth U.S.-Japan International Joint Conference on Leprosy and Tuberculosis, Bethesda, MD, July 19-21, 1993.
4. "Phagocytosis of *Mycobacterium tuberculosis* by human macrophages is enhanced by pulmonary surfactant protein A". Twenty-Ninth U.S.-Japan Cooperative Medical Science Program on Leprosy and Tuberculosis, Kyoto, Japan, August 19-22, 1994.
5. "Molecular determinants of the early mycobacteria-host cell interaction". Third International Conference on the Pathogenesis of Mycobacterial Infections, Stockholm, Sweden, June 27-30, 1996.
6. "Adhesion, ingestion and destruction of *M. tuberculosis* in macrophages". 35th Congress of the Brazilian Society of Tropical Medicine, Guarapari ES, Brazil, February 28-March 4, 1999.
7. "Evidence for the Binding of C3-opsonized and Non-opsonized *M. tuberculosis* to the A Domain of the Macrophage Integrin CR3 (CD11b/CD18)". 35th U.S.-Japan Cooperative Medical Science Program on Leprosy and Tuberculosis. Yokohama, Japan, July 19-21, 2000.
8. "Innate Immune and Microbial Determinants that Mediate the Phagocytosis and Early Fate of *M. tuberculosis* in Human Macrophages". International Symposium on Mycobacterial Diseases: Pathogenesis, Protection and Control. Calcutta, India, January 9-11, 2001.
9. "*M. tuberculosis* cell wall mannosylated lipoglycans: Elucidation of structural motifs that impact human macrophage recognition and response". 40th U.S.-Japan Cooperative Medical Science Program on Leprosy and Tuberculosis. Seattle, WA, July 28-30, 2005.
10. "Role of *Mycobacterium tuberculosis* cell wall carbohydrates in host adaptation". Pasteur Institute, Paris, France, October 6, 2006.

11. "Regulation of lung inflammation by macrophages: Impact of the lung microenvironment on tuberculosis pathogenesis". 2007 Keystone Symposium on "Tuberculosis: From lab research to field trials". Vancouver, British Columbia, March 20-25, 2007.
12. "Are we meeting the challenges of resistance to anti-infective drugs and of newly emerging infectious diseases?" Pharmaceutical Sciences World Congress, Amsterdam the Netherlands, April 22-25, 2007.
13. Foundation for Innovative New Diagnostics (FIND) meeting: Diagnosis of TB based on lipoarabinomannan (LAM) detection, Geneva, Switzerland, July 27, 2007.
14. "A subset of *Mycobacterium tuberculosis* clinical isolates within a defined genetic lineage differentially interacts with human macrophages due to a truncated lipoarabinomannan and reduced higher-order phosphatidyl-*myo*-inositol mannosides". 43<sup>rd</sup> US-Japan Cooperative Medical Science Program's Tuberculosis and Leprosy Conference and Diagnostics: Regulatory and Development Workshop, Baltimore, MD, July 8-11, 2008.
15. "Insight into *M. tuberculosis* adaptation to macrophages in the human respiratory system". First International Congress on Mycobacterial Diseases: Mycobacteria: a formidable challenge for the twenty first century, Bogota, Columbia, September 24-27, 2008.
16. "Altered macrophage interactions within the lung alveolus: Impact on tuberculosis infection". Optimization of Inhaled Tuberculosis Therapies and Implications for Host-Pathogen Interactions, New Delhi, India, November 3-5, 2009.
17. "Mycobacterium tuberculosis activates PPAR $\gamma$ , a key regulator of human macrophage immune responses, through ligation of the mannose receptor". 45<sup>th</sup> US-Japan Cooperative Medical Sciences Program, Tuberculosis and Leprosy Panel Conference, workshop and New England TB Symposium, Broad Institute, Cambridge, MA July 13-16, 2010.
18. "Adaptive interplay of *M. tuberculosis* and macrophages in the human respiratory system". The IV Simposio fronteras del conocimiento en Tuberculosis y otras Micobacteriosis. V Reunion SLAMTB. Zacatecas, Mexico, August 22-25, 2010.
19. "Adaptive interplay of *M. tuberculosis* and macrophages in the human respiratory system". Instituto De Investigaciones Biomedicas. Universidad Nacional Autonoma de Mexico. Mexico City, Mexico. August 27, 2010.
20. "Interplay of *M. tuberculosis* and macrophages in the human respiratory system". 91st Annual Meeting of the Conference of Research Workers in Animal Diseases (CRWAD). Chicago, Ill. December 5-7, 2010.
21. "The impact of tuberculosis and other respiratory tract infections at the human-animal interface". 1<sup>st</sup> International Congress on Pathogens at the Human-Animal Interface (ICOPHAI): Impact, limitations and needs in developing countries. Addis Ababa, Ethiopia, September 15-17, 2011.
22. "*M. tuberculosis* adaptation to macrophages in the human respiratory system: a role for microRNAs". State Key Laboratory of Microbial Resources, The Institute of Microbiology, Chinese Academy of Science. Beijing, China, September 27, 2011.
23. "*Mycobacterium tuberculosis* infection of human macrophages alters the expression of microRNAs and their associated immune responses". Forty-Sixth Tuberculosis and Leprosy Research Conference, US-Japan Cooperative Medical Science Program, Saitama, Japan, December 7-9, 2011.
24. "Fine tuning inflammation at the front door: Macrophage complement receptor 3 mediates phagocytosis and immune suppression for *Francisella tularensis*". 7<sup>th</sup> International Conference on Tularemia. Breckenridge, CO, September 17-20, 2012.
25. "Biology of the host-Mtb interface in the alveolus: Is sterile protection achievable?" Gates Grand Challenges Meeting. Ottawa, Canada, December 10-13, 2012.
26. "Unique immunoregulatory factors in the lung alveolus during the early microbe-host encounter." 2013 Keystone Symposium on "Host response in tuberculosis". Whistler Conference Centre in Whistler, British Columbia, Canada, March 13-18, 2013
27. Invited speaker/panelist. Research frontiers in HIV, HIV-related malignancies and TB. NIH-MRC Summit on Shared Research Priorities. Durban, SA June 17-18, 2013
28. "Key molecular switches that affect the behavior of human macrophages: potential therapeutic targets". Inhaled therapies for TB: Second meeting. Tokyo University of Science. Tokyo Japan. Oct. 1-3, 2013.
29. "Role fo pulmonary macrophage function in controlling TB infection: implications for mucosal delivery of TB vaccines via aerosol". Aersol TB vaccine workshop. NIAID/AERAS, April 9, 2014.
30. "Metabolism & macrophages: Insights from PPAR $\gamma$  & endocrinology". Workshop on Advancing Host Directed Therapy (HDT) for Tuberculosis. NIAID/Bill and Melinda Gates Foundation/Stop TB Partnership Working rroup on New Drugs. April 15-16, 2014.

31. "Tuberculosis: The challenges and possibilities for new treatment approaches" Invited faculty: Academia Sinica, Taipei, National Taiwan University, Taipei, Taipei Medical University, Taipei, National Health Research Institutes, Miaoli, Tzu-Chi University at Hualien, Hualien, Taiwan. January 5-9, 2015.
32. "Humans, animals and the microbiome: Tuberculosis and respiratory infection-animal interface." ATS 2015 International Conference, Denver, Colorado, May 15-20, 2015.
33. "Tuberculosis: the microbe-host interface in the lung". 3<sup>rd</sup> International TB meeting: Inhaled therapies for tuberculosis and other infectious diseases. Parma, Italy, October 14-16, 2015.
34. "A convergence of macrophage inflammation and metabolism." 2016 Keystone Symposium on "Tuberculosis co-morbidities and immunopathogenesis". Keystone Resort, Keystone, CO, February 28-March 03, 2016.
35. "Alveolar macrophage immunobiology and functional genomics: Unlocking human to human variation in host response to *M. tuberculosis*." Aerobiology Summit 2016. Bill & Melinda Gates Foundation. Cape Town, SA, March 22-23, 2016.
36. "Nuclear receptors and associated proteins in innate immune activation pertaining to metabolic disorders and TB." NIAID and NIDDK Workshop "Developing a comprehensive therapeutic research strategy for the converging epidemics of TB, T2DM and HIV. Rockville, MD, May 10-11, 2016.
37. "Linking *M. tuberculosis* Recognition with Human Macrophage Defense Functions". 2017 Keystone Symposium on "New developments in our basic understanding of tuberculosis. Fairmont Hotel Vancouver, Vancouver, British Columbia, Canada, January 14-18, 2017.
38. "Alveolar macrophage immunobiology and functional genomics: Unlocking human to human variation in host response to *M. tuberculosis*." Aerobiology Meeting. Bill & Melinda Gates Foundation. Seattle, WA, March 7-8, 2017.
39. "Concluding remarks and future perspectives". Tenth International Conference on the Pathogenesis of Mycobacterial Infections, Stockholm, Sweden, August 23-25, 2017.
40. "*M. tuberculosis*-human macrophage interactions define potential targets of inhaled therapy". 4<sup>th</sup> International TB meeting: Inhaled therapies for tuberculosis and other infectious diseases. Durham, NC, October 16-17, 2017.

#### Invited Presentations–National

1. "Staphylococcus aureus meningitis at a university hospital: epidemiology and prognostic factors". Twenty-Fifth Interscience Conference on Antimicrobial Agents and Chemotherapy. Minneapolis, MN, September 29-October 2, 1985.
2. "Alternative complement pathway activation in bacteremia". Twenty-Sixth Interscience Conference on Antimicrobial Agents and Chemotherapy. Sponsored by American Society for Microbiology. New Orleans, LA, September 28-October 1, 1986.
3. "Phagocytosis of leprosy bacilli by human monocytes is mediated by complement receptors CR1 and CR3". 1988 AAP/ASCI/AFCR national meeting in Washington, DC, April 29-May 2, 1988.
4. "Phagocytosis of leprosy bacilli by human monocyte-derived macrophages is complement receptor-dependent" and "Interferon gamma activation downregulates complement receptor activity and phagocytosis of these bacteria". 1990 AAP/ASCI/AFCR national meeting in Washington, DC, May 4-7, 1990.
5. "Phenolic glycolipid-1 of *Mycobacterium leprae* is an acceptor molecule for complement component C3 and may mediate complement receptor-dependent phagocytosis". 1990 AAP/ASCI/AFCR national meeting in Washington, DC, May 4-7, 1990.
6. "Natural antibody mediates C3 fixation to the leprosy bacillus and C1q binding to phenolic glycolipid-1, the C3 acceptor molecule on the bacterial surface". 1991 AAP/ASCI/AFCR national meeting in Seattle, WA, May 3-6, 1991.
7. "Roles of complement receptors, the mannosyl-fucosyl receptor, and pulmonary surfactant protein, SP-A in phagocytosis of *Mycobacterium tuberculosis* by human macrophages". 1992 AAP/ASCI/AFCR national meeting in Baltimore, MD, May 1-4, 1992.
8. "Macrophage phagocytosis of mycobacteria". Frontiers in Mycobacteriology Symposium entitled "*M. avium*, the Modern Epidemic" in Vail, CO, October 15-19, 1992.
9. "The role of mannose receptors in macrophage phagocytosis of virulent *Mycobacterium Tuberculosis* strains, a role for lipoarabinomannan". 1992 World Congress on Tuberculosis, Bethesda, MD, November 16-19, 1992.

10. "Immune defects in AIDS that predispose to mycobacterial infection". 1993 ASM General Meeting, Atlanta, GA, May 16-20, 1993.
11. Divisions of Pulmonary and Infectious Diseases, UCSD. "Host and microbial determinants that mediate phagocytosis of *M. leprae* and *M. tuberculosis*" and "Immune defects in HIV that predispose to mycobacterial infection". Pulmonary and Infectious Diseases Grand Rounds, UCSD Medical Center, San Diego, CA, June 10, 1993.
12. "Phagocytosis of mycobacteria". "Cell Biology of Mycobacteria-Phagocyte Interactions" Symposium at the 94th General Meeting of the American Society for Microbiology in Las Vegas, NV, May 23-27, 1994.
13. "A major mycobacterial lipoglycan that mediates adherence of *M. tuberculosis* to macrophage mannose receptors". 1994 Inflammation and Host Defense, Iowa-Minnesota Symposium, Minneapolis, MN, June 7, 1994.
14. "Receptor-mediated phagocytosis of *M. tuberculosis* by human phagocytes". Fourth Annual Lung Cell Biology Conference on "Molecular Biology and Immunology of Mycobacterial Infection," Woods Hole, MA, October 9-12, 1994.
15. "Host and bacterial determinants that mediate phagocytosis of *Mycobacterium tuberculosis*". 1995 Keystone Symposia Conference on "Molecular mechanisms in tuberculosis". Tamarron, CO, February 19-25, 1995.
16. "Molecular mechanisms of the interaction of *M. tuberculosis* with leukocytes". Gordon Research Conference on Microbial Adhesion and Signaling Newport, Rhode Island, June 26-30, 1995.
17. "Host and microbial determinants of the early *M. tuberculosis* macrophage encounter". Second Annual Midwest Bacterial Pathogenesis Meeting, Chicago, IL, September 15-17, 1995.
18. "Host and bacterial determinants that mediate *M. tuberculosis*-phagocyte interactions". North Central Branch of ASM, Iowa City, IA, October 5-7, 1995.
19. "The early *M. tuberculosis* - phagocyte encounter". "Immunobiology of *M. tuberculosis*" Symposium at the 96th General Meeting of the American Society for Microbiology, New Orleans, LA, May 19-23, 1996.
20. Division of Infectious Diseases, Boston University. "The early interaction between *M. tuberculosis* and the mononuclear phagocyte". April 22, 1996.
21. Dept. of Internal Medicine, Michigan State University. "Update on tuberculosis". Medicine Grand Rounds, April 17, 1996.
22. The Center for Pulmonary and Infectious Disease Control, The University of Texas Health Center at Tyler. "Interaction between *M. tuberculosis* and macrophages during the early stages of infection". January 10, 1997.
23. Schlesinger LS, Gaynor CD, Ferguson JS, Voelker DR, McCormack FX. Pulmonary surfactant-associated proteins A and D potentially regulate innate immune responses to *M. tuberculosis* in the lung. ASM Conference on Tuberculosis: Past, Present, and Future, Copper Mountain Resort, Copper Mountain, CO, July 8-12, 1997.
24. Division of Infectious Diseases and Pulmonary Medicine, University of Cincinnati. "Characteristics of the Phagocytic Pathway for *M. tuberculosis* in Mononuclear Phagocytes". December 22, 1997.
25. "LAM-mediated macrophage adherence and Phagosome modulation by *M. tuberculosis*". "Mycobacterial cell walls: The Interface between pathogen and Host Cells" workshop at the 1998 Keystone Symposium on Tuberculosis: Molecular mechanisms and Immunologic Aspects. Keystone, CO, April 2-8, 1998.
26. "Medical Management of Tuberculosis". AAPA's 26th Annual Physician Assistant Conference, Salt Lake City, Utah, May 27, 1998.
27. "Evidence for the Binding of C3-opsonized and Non-opsonized *M. tuberculosis* to the A Domain of Integrin CR3 (CD11b/CD18)". "Effects of Bacterial Products on Macrophages" workshop at the 1999 Keystone Symposium on Macrophage Biology. Keystone, CO, January 22-28, 1999.
28. Disruption of Iron-dependent Metabolism in Pathogenic Mycobacteria by the Trivalent Metal Gallium. Sixth Annual Midwest Bacterial Pathogenesis Meeting, Milwaukee, WI, September 10-12, 1999.
29. Biology Department, Notre Dame. Departmental Lecture. Innate immune determinants in the lung for *M. tuberculosis*. South Bend, IA. November 9, 1999.
30. Annual Meeting Infectious Diseases Society of America TB Workshop. Convenor. Philadelphia, PA. November 18, 1999.
31. Annual Meeting Infectious Diseases Society of America Symposium. Co-convenor. The Molecular Basis of *Mycobacterium tuberculosis* Pathogenesis and Transmission. Philadelphia, PA. November 18, 1999.

32. Co-chairman, break out session on "Administrative Controls, skin testing, and treatment of latent TB infection". Meeting: Tuberculosis Infection Control in the 21st Century. Sponsored by ATS, IDSA, ACCP. Crystal City, VA, December 10-12, 1999.
33. "Pulmonary Surfactant Protein A (SP-A) Activates a Calcium Signaling Pathway and Upregulates Mannose Receptor Expression on Human Macrophages". Institute for Environmental Medicine Summer FASEB Meeting on Lung Surfactant: Cellular and Molecular Biology, Saxtons River, VT, July 1-6, 2000.
34. "The *M. tuberculosis* LAM-macrophage Mannose Receptor Pathway". ASM Symposium, Macrophage Responses to *Mycobacterium tuberculosis*, Orlando, FL, May 22, 2001.
35. "Innate Immune and Microbial Determinants that Mediate the Phagocytosis and Early Fate of *M. tuberculosis* in Human Macrophages ". USAMRIID, Frederick, MD, March 29, 2001.
36. "At the Interface: *M. tuberculosis*-Macrophage Interactions". Department of Microbiology, The University of Texas Health Science Center at San Antonio, December 6, 2001.
37. Summer FASEB Meeting on Lung Surfactant: Cellular and Molecular Biology, Saxtons River, VT, July 20-25, 2002.
38. 3rd Havemeyer Foundation Workshop on *Rhodococcus equi*. Washington State, Seattle, WA, July 13-17, 2002.
39. "The lung innate immune response to *M. tuberculosis*: a central role for the macrophage" and "Tuberculosis: a century of learning". Infectious Diseases Fellowship Symposium "Globalization of Respiratory Diseases: Epidemiology, Pathogenesis, & Treatment". Mobile Bay, AL, January 23-25, 2003.
40. Frank N. Nelson Distinguished Lecturer in Molecular Biology, Biotechnology and Medicine. Montana State University, Bozeman, Montana, May 16, 2003. "*Mycobacterium tuberculosis* and Lung Innate Immunity: A Central Role for the Macrophage"
41. "Lung innate immunity and tuberculosis: A central role for the macrophage". University of Washington, Dept. of Microbiology, Seattle, WA, February 24, 2004.
42. "Surfactant Protein A contributes to the alternative activation state of Lung macrophages". University of Cincinnati, Division of Pulmonary Medicine and Critical Care Grand Rounds, Cincinnati, OH, October 25, 2004.
43. "Regulation of lung inflammation by macrophages: impact on respiratory infections". Medical College of Ohio, Department of Microbiology and Immunology, November 10, 2004.
44. "Impact of pulmonary collectins on macrophage immune responses to microbes". Mucosal Immunology Conference, The Ohio State University College of Veterinary Medicine, September 19, 2005.
45. "*Mycobacterium tuberculosis* adaptation to the host: Sweet-talking one's way in". 12th Annual Midwest Microbial Pathogenesis Conference, University of Minnesota, Minneapolis, MN, October 15, 2005.
46. "Lung innate immune responses to *Francisella tularensis*: A central role for the macrophage". Regional GLRCE Meeting, Hilton head, SC, December 1-3, 2005.
47. "*Mycobacterium Tuberculosis* Adaptation to the Host: Sweet-talking One's Way In". Department of Microbiology and Molecular Genetics, Medical College of Wisconsin, February 7, 2006.
48. "Tuberculosis: New insights on an old scourge". Division of infectious diseases, RWJ Medical School, Piscataway, NJ, May 11, 2006.
49. Session: Microbial Cell Wall Carbohydrates and Immunity. "*M. tuberculosis* Cell Wall Mannosylated Lipoglycans: Structural Motifs that Impact Human Macrophage Recognition and Response". 106th Annual Meeting of the American Society for Microbiology, Orlando, Fla, May 22, 2006.
50. "Role of *M. tuberculosis* cell wall carbohydrates in host adaptation". Annual Society of Glycobiology Meeting, Los Angeles, CA, November 15-18, 2006.
51. "New insights into tuberculosis". 35<sup>th</sup> Annual Joint Conference of the New Jersey Thoracic Society, Hilton Woodbridge, Iselin, NJ, March 2, 2007.
52. "Adaptation of *Mycobacterium tuberculosis* to the lung microenvironment". Center for Genomic Sciences, Allegheny-Singer Research Institute, Pittsburgh, PA, April 16, 2007.
53. "Role of *Mycobacterium tuberculosis* cell wall carbohydrates in host adaptation". U Texas Tyler, Tyler, Tx, May 10, 2007.
54. "Insight into *M. tuberculosis* adaptation to the human respiratory system". Immunology Forum, Department of Microbiology, Immunology & Molecular Genetics, UCLA, LA, CA, September 10, 2007.
55. "Tuberculosis: New Insights on an old scourge". "Regulation of Lung Inflammation by Macrophages: Impact of the Alveolar Microenvironment on Tuberculosis Pathogenesis". Internal Medicine Grand rounds and Pulmonary Research Conference, University of Cincinnati, October 17, 2007.

56. "Regulation of lung inflammation by macrophages: Impact of the alveolar microenvironment on tuberculosis pathogenesis". Harvard School of Public Health, Boston, Mass., October 23, 2007.
57. "Lung innate immune response to *Francisella*". GLRCE focus meeting. Chicago, Ill, October 25, 2007.
58. "Regulation of lung inflammation by macrophages: Impact of the alveolar microenvironment on tuberculosis pathogenesis". NIH Rocky Mountain Labs, Hamilton, MT, December 10, 2007.
59. "Insight into *M. tuberculosis* adaptation to the human respiratory system". Dept of Micro and Immunol, University of Louisville School of Medicine Health Sciences Center, Louisville, KY, February 7, 2008.
60. "Insight into *M. tuberculosis* adaptation to the human respiratory system". Dept of Micro and Immunol, University of Rochester School of Medicine and Dentistry, Rochester, NY, March 10, 2008.
61. "Lung innate immune responses to *Francisella tularensis*: a central role for the macrophages". Fifth national meeting of the RCE for biodefense and emerging infectious diseases research. Chicago, Ill, April 6-8, 2008.
62. Harvard School of Public Health: Tuberculosis: Past Challenges and Promise. Boston, Mass, May 5, 2008.
63. "Insight into *M. tuberculosis* adaptation to the human respiratory system". Wadsworth Center, NYDOH, Albany NY, May 6, 2008.
64. "Research to study virulence of *Mycobacterium avium* Complex bacteria from drinking water". EPA Virtual Environmental Microbiology Seminar, June 18, 2008.
65. "Receptor ligand pathways in regulation of lung innate defense to airborne pathogens". FASEB Summer Research Conference, Lung epithelium in development and disease, August 3-8, 2008.
66. "Insight into *M. tuberculosis* adaptation to macrophages in the human respiratory system". Department of Microbiology, Miami University, Oxford, OH, October 15, 2008.
67. "Insight into *M. tuberculosis* adaptation to the human respiratory system". Department of Microbiology, University of Alabama at Birmingham, Birmingham, AL, November 4, 2008.
68. "Insight into *M. tuberculosis* adaptation to the human respiratory system". Immunology Seminar Series. Case Western Reserve University, Cleveland, OH, March 24, 2009.
69. "Insight into *M. tuberculosis* adaptation to macrophages in the human respiratory system". Institute for Environmental Medicine, University of Pennsylvania, Philadelphia, PA. May 28-29, 2009.
70. "Innate immunity: regulation of lung innate defense to airborne pathogens". CBRNIAC-sponsored technology forum on emerging CBRN defense R&D requirements, Battelle Eastern Science and Technology Center, Aberdeen, MD. September 23, 2009.
71. Annual Program Meeting of the Tuberculosis Research Unit, Case Western Reserve University, Cleveland, OH, October 5, 2009.
72. "Interplay of *M. tuberculosis* and macrophages in the human respiratory system". Public Health Research Institute Center at UMDNJ New Jersey Medical School, Newark, NJ, October 20, 2009.
73. "Interplay of *M. tuberculosis* and macrophages in the human respiratory system". UT School of Public Health, Brownsville campus, Brownsville, TX, November 12-14, 2009.
74. "Host and bacterial targets mediating immune suppression in pneumonic tularemia". GLRCE Annual Meeting, Chicago, Ill., December 4-5, 2009.
75. "Host and bacterial targets mediating immune suppression in pneumonic tularemia: Regulation of the Complement system". GLRCE Annual Meeting, Chicago, Ill., September 28-29, 2010.
76. "Adaptive interplay of *M. tuberculosis* and macrophages in the human respiratory system". Department of Environmental Health, University of Cincinnati, Cincinnati, OH, October 26-27, 2010.
77. "Interplay of *Mycobacterium tuberculosis* and macrophages in the human respiratory system". The first annual Microbial Infection and Immunity Symposium, Northwestern University, Chicago, IL, March 30, 2011.
78. "A link between complement receptor 3-mediated uptake of *Francisella tularensis* and immune suppression in human macrophages". Seventh National RCE meeting, Denver, CO, April 3-5, 2011.
79. "OSU COM Independent Study Program". Group on Graduate Research, Education and Training (GREAT), MD-PhD Section Annual Meeting: Training the Modern Day MD-PhD Workforce: Rich Opportunities and New Challenges. Minneapolis, Minn, July 28-30, 2011.
80. "Host and bacterial targets mediating immune suppression in pneumonic tularemia". GLRCE Annual Meeting, Chicago, Ill., August 23-24, 2011.
81. "Advances in tuberculosis: insights from the lab". Internal Medicine Grand Rounds and "*M. tuberculosis* adaptation to macrophages: a role for microRNAs". ID Research Conference. University of Iowa, Iowa City, IA, November 9-10, 2011.
82. "Advances in tuberculosis: insights from the lab". Infectious Diseases Grand Rounds and "*M. tuberculosis* adaptation to macrophages: a role for microRNAs". Department of Pathology, Microbiology and Immunology Research Conference. Vanderbilt University, Nashville, TN, February 7-8, 2012.

83. "Host and bacterial targets mediating immune suppression in pneumonic tularemia". GLRCE Annual Meeting, Chicago, Ill., August 21-22, 2012.
84. "Adaptive interplay of *M. tuberculosis* and the host during infection in the human respiratory system". TB Retreat, Case Western Reserve University, Cleveland, OH, December 7, 2012
85. "Fine tuning inflammation at the front door: Macrophage complement receptor 3 mediates phagocytosis and immune suppression for *Francisella tularensis*". Department of Microbiology and Immunology. Indiana University School of Medicine, Indianapolis, IN, January 17, 2013.
86. "Immunoregulatory MicroRNAs and Tuberculosis". Department of Microbiology and Immunology. Dartmouth-Hitchcock Medical Center, Hanover NH, April 29, 2013.
87. "Anti-TB drug discovery through lead optimization of protein kinase inhibitor OSU-03012". 2013 Harrington Discovery Institute Inaugural Scientific Symposium, Cleveland, OH, May 9&10, 2013.
88. "A perspective on *M. tuberculosis* cell wall carbohydrates and immunity". Front range mycobacteria conference. Mycobacteria Research Laboratories. Colorado State University, Ft. Collins, CO, June 19-21, 2013.
89. "Host and bacterial targets mediating immune suppression in pneumonic tularemia". GLRCE Annual Meeting, Chicago, Ill., August 20, 2013.
90. "Potential use of a human TB granuloma model as a bioassay for therapies and vaccines." Aeras, Rockville, MD, October 15, 2013.
91. "Immunoregulatory factors in the interplay of *M. tuberculosis* and macrophages in the human respiratory system". Department of Molecular Microbiology & Immunology, Oregon Health & Science University, Portland OR, October 21, 2013.
92. "Immunoregulatory factors in the interplay of *Mycobacterium tuberculosis* and macrophages in the human respiratory system". Tulane National Primate Research Center, Covington, LA, November 7,8, 2013.
93. "Adaptive interplay of *M. tuberculosis* and macrophages in the human respiratory system". Department of Microbiology and Immunology, Center for Molecular & Tumor Virology. Louisiana State University Health Sciences Center, Shreveport, LA, November 13, 14, 2013.
94. "Immunoregulatory factors in the interplay of *Mycobacterium tuberculosis* and macrophages in the human respiratory system". Department of Molecular Microbiology & Immunology, Saint Louis University School of Medicine, St. Louis, MO, November 21, 2013.
95. "Immunoregulatory factors in the interplay of *Mycobacterium tuberculosis* and macrophages in the human respiratory system". Department of Microbiology & Immunology, University of North Carolina Chapel Hill, NC. December 3, 2013.
96. "Immunoregulatory factors in the interplay of *Mycobacterium tuberculosis* and macrophages in the human respiratory system". College of Pharmacy, University of Oklahoma, Oklahoma City, OK. March 4-5, 2014.
97. "Adaptive interplay of *M. tuberculosis* and macrophages in the human respiratory system". Department of Medical Microbiology and Immunology. The University of Toledo College of Medicine and Life Sciences, Toledo, OH. April 1, 2015.
98. "Adaptive interplay of *M. tuberculosis* and macrophages in the human respiratory system". Mycobacterial Seminar Series. Albert Einstein College of Medicine of Yeshiva University. Bronx, NY, April 21-22, 2015.
99. "Programs for MD-PhD Alumni Engagement"; "Publication pearls of wisdom"; "Research in Residency Training Programs". National MD PhD Association Meeting and MD PhD Student Meeting. July 16-17, Keystone, CO, 2015
100. "Tuberculosis: The challenges and possibilities for new treatment approaches." Center for Predictive Medicine. The University of Louisville, Louisville, KY, October 9, 2015.
101. "Tuberculosis: Challenges and possibilities for new treatment approaches." Eck Institute, University of Notre Dame, South Bend, IN, December 2-3, 2015.
102. "Alveolar macrophage immunobiology and functional genomics: Unlocking human to human variation in host response to *M. tuberculosis*." Natural resistance to Mycobacterial infection meeting. Bill & Melinda Gates Foundation. Seattle, WA, January 28, 2016.
103. "What is translational research", "Ethics – Paper submissions and data reproducibility". Panelist. AAP-ASCI-APSA joint meeting. April 15-17, 2016.
104. "Approaches to the study of tuberculosis". Transdisciplinary approaches to health and wellness. Merit-NIH National Veterinary Scholars Symposium. Columbus, OH, July 28-31, 2016.
105. "Potential use of an in-vitro granuloma model as a functional assay for TB vaccines." Developing functional assays for TB vaccine R&D: an AERAS/NIAID workshop. Rockville, MD, September 28-29, 2016.

106. "Tuberculosis: Challenges and New Translational Approaches to Study". Wadsworth Center, NYDOH, Albany, New York, October 27, 2016.
107. "New Scientific Platforms to Study Human tuberculosis." 1<sup>st</sup> Annual Academic Alliance Meeting, Mayo Clinic Center for Tuberculosis, Rochester, Minn, November 29, 2016
108. "A convergence of macrophage inflammation and metabolism in response to tuberculosis." Department of Immunobiology, Cincinnati Children's Hospital, Cincinnati, OH, Dec 6, 2016
109. "Tuberculosis: Challenges and New Translational Approaches to Study". University of North Dakota, Grand Forks, ND, March 28, 29, 2017
110. "Modeling the granuloma-The critical battlefield in host immunity and disease". Americas Association of Sarcoidosis and Other Granulomatous Disorders Annual Conference. Penn State College of Medicine, Hershey, PA, April 7-8, 2017.
111. "Tuberculosis: challenges and new translational approaches to study". Keynote speaker. Eleventh annual research symposium. Texas Tech University health sciences center El Paso. El Paso, Tx. April 18-20, 2017.
112. "The lipid-filled aleolar macrophage and tuberculosis". Gordon Research Conference on Phagocytes. Waterville Valley, NH, June 11-16, 2017.
113. "Induced privilege scenarios. *M. tuberculosis* adaptation to its intracellular niche". Molecular Mechanisms and Immune Consequences of Pathogen Reservoirs: Battling Unseen Enemies, DMID/DAIT Co-Sponsored Workshop, September 19-20, 2017.

#### **Presentations—State**

1. "Host and bacterial molecules mediating macrophage phagocytosis of mycobacteria". 1992 Infection and Immunity, Iowa-Minnesota Symposium, Iowa City, IA, June 2, 1992.
2. "Multi-drug resistant tuberculosis". "The Many Faces of Tuberculosis" Conference. Sponsored by Iowa Department of Public Health, American Lung Association of Iowa and the Iowa Public Health Association, West Des Moines, IA, October 27, 1992.
3. "Tuberculosis: what's new?" 17th Annual Iowa Infection Control Seminar, Cedar Rapids, IA, April 13-14, 1993.
4. "Tuberculosis: diagnosis, treatment of containment". An interactive teleconference by satellite and the Iowa Communications Network. Sponsored by University of Iowa Hospitals and Clinics, American Lung Association of Iowa, University of Iowa College of Medicine, Iowa City, IA, July 13, 1993.
5. "Multi-resistant tuberculosis - threat to U.S. health". 1993 University of Iowa Hospitals and Clinics Clinical Epidemiology Symposium entitled "Safeguarding America's Health Care". Iowa City, IA, October 8, 1993.
6. "Multi-drug resistant TB and HIV". "The Many Faces of Tuberculosis" Conference. Sponsored by Iowa Department of Public Health, American Lung Association of Iowa and the Siouxland District Health Department, Sioux City, IA, October 26, 1993.
7. "Tuberculosis and HIV". "AIDS 1994: An Interdisciplinary Conference for Health Care Professionals" Conference. Sponsored by Department of Medicine, The University of Iowa, Iowa City, IA, September 2, 1994.
8. "Epidemiology (including multidrug-resistant TB and disease in AIDS patients)". University of Iowa Symposium entitled "Tuberculosis and the Health Care Workforce". Sponsored by UI Tuberculosis Task Force, Dept. Internal Med., UI College of Medicine and the Midwest AIDS Training and Education Center; in association with the UI Dept. of Nursing, April 30, 1996.
9. "TB and HIV Infection Control". AIDS 1996: An Interdisciplinary Conference for Health Care Professionals. Sponsored by Department of Medicine, The University of Iowa, Iowa City, IA, September 13, 1996.
10. "Non-tuberculous Mycobacteria in Immunocompromised Hosts". Medicine Grand Rounds, Iowa Methodist Medical Center, Des Moines, IA, February 18, 1997.
11. "Epidemiology, Including Drug Resistant TB and TB in AIDS Patients". Symposium entitled "Tuberculosis in the Heartland". Sponsored by Iowa Department of Public Health TB Control Program and the UI TB Task Force, May 1, 1997.
12. "TB Epidemiology; Including Drug Resistant TB and How it may Impact on Iowa". Symposium on Tuberculosis. Sponsored by Iowa Department of Public Health TB Control Program, February 4, 1998.
13. "Emergency Evaluation of the Unusual". Cedar Rapids Medical Education Foundation, St. Luke's Hospital, Cedar Rapids, IA, February 26, 1998.

14. "TB in the Workplace". "Current Topics in Occupational Health" Conference. Sponsored by Preventive Medicine and Environmental Health, University of Iowa, May 12, 1998.
15. "Tuberculosis Update". 23rd Annual Iowa Infection Control Seminar. Sponsored by UI Program of Hospital Epidemiology, May 11-12, 1999.
16. "TB Epidemiology, World Wide Issues and Drug Resistant TB, Impact on Iowa". "Tuberculosis, Impact in Iowa, Impact in Dubuque" Conference, May 12, 1999.
17. "The Mycobacteria/HIV Interaction". HIV/AIDS Prevention 2000, Des Moines, IA, October 21-22, 1999.
18. "Tuberculosis Diagnosis and Treatment". Tuberculosis Conference, Waterloo, IA, January 19, 2000.
19. "Tuberculosis". Cedar Rapids Medical Education Foundation, St. Luke's Hospital, Cedar Rapids, IA, February 24, 2000.
20. "New Developments in Tuberculosis Management" and "Infectious Diseases Emergencies". Third Annual Update in Infectious Diseases, Galena, IL, May 5, 2000.
21. Keynote Speaker. Scholar's Day, Iowa Memorial Union, September 23, 2000.
22. "When *Mycobacterium tuberculosis* Meets its Host Cell, the Macrophage". Iowa Microscopy Society 2000, Department of Internal Medicine, Seeborn Conference Room, October 13, 2000.
23. University of Iowa Tuberculosis Symposium. Sponsored by UI Hospital Tuberculosis Task Force/Infection Control, the State Health Department, and the Midwest AIDS Training and Education Center, May 7, 2002.
24. "New and Emerging Infections-The World Today". 20th annual meeting of the Dermatological Association, Columbus, OH, October 31, 2003.
25. "Trends in Tuberculosis Treatment and Incidence". Grand Rounds Speaker, OSU East Hospital, Columbus, OH, May 28, 2004.
26. The Ohio State University branch of Alpha Epsilon Delta (AED), a national premed honor society, January 26, 2005.
27. "Tuberculosis". Center for Continuing Medical Education Webcast Program, The Ohio State University, February 4, 2005.
28. "Tuberculosis and Pulmonary Innate Immunity". Ohio Agricultural Research and Development Center, March 24, 2005.
29. "*Mycobacterium tuberculosis* and lung innate immunity". Ohio Branch ASM Annual Meeting, Ohio Wesleyan University, April 16, 2005.
30. "Infectious Diseases 2005: Issues in Infection Management, Control, and Prevention". Division of Infectious Diseases/The Ohio State University Medical Center. Columbus, OH, May 7, 2005 (Annual event 2005-present)
31. "Infectious Agents of concern to the public 2005". Columbus Health Department Public Health Learning Series, Columbus, OH, June 8, 2005.
32. "Forging New Directions in Medicine". Lunch and Learn speaker series, The Ohio State University Research Foundation, Columbus OH, September 15, 2005.
33. "Tuberculosis: New Insights on an old Scourge". Pathology Grand Rounds, The Ohio State University, November 9, 2005.
34. "*M. tuberculosis* cell wall mannosylated lipoglycans: Elucidation of structural motifs that impact human macrophage recognition and response". Microbiology Department, The Ohio State University, November 17, 2005.
35. "Infectious diseases research/biosecurity research program at the Ohio State University". Tri-Village Rotary Club Meeting, Columbus, Ohio, November 29, 2006.
36. "New insights into tuberculosis: Mechanisms of virulence and host adaptation". Columbus Children's Research Institute, Columbus, Ohio, December 7, 2006.
37. "Infectious Diseases and public health preparedness in the 21<sup>st</sup> century: Challenges and opportunities for discovery and application". The Ohio State University Winter College, Bonita Springs, Florida, February 23 and 24, 2007.
38. "Challenges in tuberculosis therapy: Using discovery-based science for new approaches". Department of Pharmacology, College of Pharmacy, University of Toledo, Toledo, Ohio, April 3, 2007.
39. "Pathogenesis, transmission and immunology of TB". Columbus Public Health, Columbus. Ohio, April 19, 2007.
40. Antimicrobial Resistance Conference: Interface between human and animal health. College of Veterinary Medicine and Medicine, The Ohio State University, August 27, 2007.
41. "What's new on the horizon for TB control". Ohio World TB Day Conference. Biomedical Research Tower, Ohio State University, Columbus, OH, March 14, 2008.

42. "What's new on the horizon for TB control". Columbus Public Health, Columbus, OH, April 9, 2008.
43. "Update on Non-Tuberculous Mycobacteria". Infectious Diseases Society of Ohio, Columbus, OH, April 4, 2009.
44. "The nature of infectious disease: little bugs, big problems". The supreme court of Ohio judicial college: introduction to public health & science. August 12-13, 2010, Cherry Valley Lodge, Newark, OH.
45. "Scientific discovery in infectious diseases at the intersect of animal and human health; effective partnerships that breed success". Ohio State University College of Veterinary Medicine research week. April 13, 2011. Columbus, OH.
46. "Advances in tuberculosis: Insights from the lab". Internal Medicine Grand Rounds, Ohio State University. October 6, 2011.
47. "Adaptive interplay of *M. tuberculosis* and macrophages in the human respiratory system". Center for Perinatal Research, The Research Institute at Nationwide Children's Hospital, Columbus, OH. April 16, 2012.
48. "Welcome remarks". National Institute for Animal Agriculture sponsored symposium "A One Health Approach to Antimicrobial Use & Resistance: A dialogue for a Common Purpose." Hilton Polaris Hotel, Columbus, OH, November 13-15, 2012.
49. Speaker, Business of Science Program, CCTS, OSU, November 13, 2014.
50. Tuberculosis: Challenges and New Translational Approaches to Study. Division of Pharmaceutics and Pharmaceutical Chemistry, College of Pharmacy, OSU, May 2, 2017
51. "Tuberculosis: Ongoing challenges and the road forward in scientific approaches". Keynote speaker. San Antonio Postdoctoral research forum. UT Health San Antonio, September 21, 2017
52. "Tuberculosis: Challenges and New Translational Approaches to Study". UTSA and the South Texas Center for Emerging Infectious Diseases. October 20, 2017.