

CURRICULUM VITAE**MICHAEL B. FESSLER, M.D.****I. Personal History**

Present Position: Senior Investigator, Clinical Investigation in Host Defense Group
Deputy Chief; Immunity, Inflammation and Disease Laboratory
Division of Intramural Research
National Institute of Environmental Health Sciences
National Institutes of Health, Department of Health and Human Services

II. Educational History**Princeton University**

B.A. in Philosophy 1992
Magna Cum Laude

Harvard Medical School

M.D. 1996

Massachusetts General Hospital

Internal Medicine Residency 1996-99

University of Colorado Health Sciences Center

Fellowship in Pulmonary Sciences and Critical Care Medicine 1999-2002

Board Certification

2000 Internal Medicine
2012 Pulmonary Medicine
2014 Critical Care Medicine

Medical Licensure

Colorado 1999-2007
North Carolina 2006-present

Miscellaneous

Diplomate, NIH Senior Leadership Training Program (2014)

III. Research Training

1991-1992 Technician, Bristol-Myers Squibb Company: Macromolecular Chemistry Lab
Developed protocol for amino acid analysis of peptides.

1993 Technician, Renal Division, Brigham & Women's Hospital, Boston

Used DD-PCR to characterize mouse model for polycystic kidney disease.

1999 Internal Medicine Resident, Massachusetts General Hospital, Boston
Analyzed NMR data to study skeletal muscle ventilatory chemoreflex.

2000-2002 National Jewish Medical and Research Center, Denver, CO
Research Fellow

IV. Professional Positions

2013-present Senior Investigator
Division of Intramural Research, National Institute of Environmental Health Sciences,
NIH, DHHS

2006-2013 Clinical Investigator (Tenure-Track)
Division of Intramural Research, National Institute of Environmental Health Sciences,
NIH, DHHS

2009-present Adjunct Assistant Professor of Medicine
Duke University School of Medicine
Durham, NC

2013-present Member, Training Faculty
Curriculum in Toxicology
University of North Carolina-Chapel Hill
Chapel Hill, NC

2003-2006 Assistant Professor of Medicine
University of Colorado School of Medicine
Denver, CO

2002-2003 Instructor of Medicine
University of Colorado School of Medicine
Denver, CO

2004-2006 Assistant Professor of Medicine
National Jewish Medical and Research Center
Denver, CO

2003-2004 Instructor of Medicine
National Jewish Medical and Research Center
Denver, CO

2002-2003 Research Fellow
National Jewish Medical and Research Center

Denver, CO

V. Honors and Awards

- 1992 Phi Beta Kappa, Magna Cum Laude, Cane Scholarship
Princeton University
- 2001 Andrew Goodman Research Fellowship Award
National Jewish Medical and Research Center
- 2008 Division of Intramural Research Early Career Award
NIEHS, NIH, DHHS
- 2008 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, Sept.)
Smoak K et al. *Journal of Immunology* 2008; 180(5):3305-12.
- 2009 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, June)
Dhungana S et al. *Molecular & Cellular Proteomics* 2009; 8(1):201-213.
- 2010 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, August)
Smoak KA et al. *Cell Metabolism* 2010; 11(6):493-502.
- 2010 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, Sept.)
Madenspacher JH et al. *Journal of Immunology* 2010; 185(3):1660-9.
- 2010 Intramural Research Award
NIEHS, NIH, DHHS
- 2011 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, Oct.)
Merrick BA et al. *Molecular & Cellular Proteomics* 2011; 10(10):M110.006007.
- 2012 Carol Basbaum Award
American Thoracic Society
- 2012 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, Nov.)
Jaramillo R, et al. *Journal of Allergy & Clinical Immunology* 2013; 131(2):405-11.
- 2013 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, July)
Madenspacher J et al., *Journal of Experimental Medicine* 2013; 210(5):891-904.
- 2014 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, May)
Gale et al., *Journal of Allergy and Clinical Immunology* 2014 Mar 18.
- 2014 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, June)
Lowe et al., *Cancer Research* 2014; 74(8):2812-92

- 2014 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, December)
Gowdy et al., *Mucosal Immunol* 2014 Oct 22 Epub.
- 2015 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, September)
Chowdhury et al., *Molecular & Cellular Proteomics* 2015; 14(7):1859-70.
- 2015 Inducted Member, American Society for Clinical Investigation
- 2016 Special Act Award, NIEHS
- 2016 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, November)
Lai et al., *Journal of Biological Chemistry* 2016; 291(37):19651-60.
- 2016 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, December)
Lowe et al., *Cell Death Differ* 2016 Nov. 11
- 2017 NIEHS Group Merit Award, Inflammation Research Implementation
- 2017 Scientific Director's Award for Outstanding Intramural Research, NIEHS/NIH
- 2017 Top Reviewer Award, *American Journal of Respiratory Cell and Molecular Biology*

VI. Patents

U.S. Patent #: US 9,211,302 B2 (12/15/15): 'Modulation of Lrch4 activity and Therapeutic Application Thereof' (inventors: Michael B. Fessler, Jim J. Aloor)

VII. Trainees

Postdoctoral:

- 1/07 – 12/08 Suraj Dhungana, Ph.D.; Current Position: Senior Proteomics Scientist, RTI International, Research Triangle Park, NC
- 9/07 – 1/11 David Draper, Ph.D.; Current Position: Technical Project Manager, BD Biosciences
- 10/07 – present Jim J. Aloor, Ph.D.; Current Position: Research Assistant Professor, East Carolina Diabetes and Obesity Institute, East Carolina University
- 12/09 – 7/12 Saiful Chowdhury, Ph.D.; Current position: Assistant Professor, Dept. of Chemistry and Biochemistry, University of Texas at Arlington
- 5/10 – present Julie Lowe, Ph.D. (IRA Fellow with Dr. Michael Resnick)

- 5/11 – 9/14 Kymberly Gowdy, Ph.D.; Current Position: Assistant Professor, Dept. of Pharmacology and Toxicology, East Carolina University
- 3/13 – 4/17 Kristin Gabor, Ph.D.; Current Position: Integrated Product Development Associate; Rho, Inc., Chapel Hill, NC
- 11/15 – present Wan-Chi Lin, Ph.D.
- 1/16 – present Prashant Rai, Ph.D.

Other:

- 2007 Ugonma Chukwueke (summer student)
Current position: Neurology resident, UTSW
- 2008 Katherine Weissler (summer student)
Current position: Graduate student (Dept. of Biology, University of VA)
- 2011-2012 John Guardiola (post-baccalaureate fellow)
Current position: Medical student, University of Louisville, KY
- 2012 William Ge (summer student)
Current position: Undergraduate student, Yale University
- 8/12-1/13 Kezia Addo (post-baccalaureate fellow)
Current position: Graduate student, University of North Carolina
- 9/12 – 9/13 Lihua Lai (graduate student from Zhejiang University, China)
- 3/13 – 8/15 Michael Henderson (graduate student from University of North Carolina)
Current position: Graduate Student, UNC
- 2015 Shiyi Li (summer student)
Current position: Undergraduate, Princeton University
- 2016- Teminioluwa Ajayi, MPH (Medical student, Duke University)
- 2016- Emily Mesev (post-baccalaureate fellow)

Honors/Awards to Trainees

- 2008 Fellows Award for Research Excellence, NIH
Recipient: Suraj Dhungana, Ph.D. (Postdoctoral fellow)
- 2009 Abstract Travel Award

- American Thoracic Society International Conference 2009
Recipient: David Draper, Ph.D. (Postdoctoral fellow)
- 2009 Oral presentation: 'MyD88 Couples Cholesterol Transport to Inflammation'
2009 Keystone Conference, Pathogen Receptors, Banff, Canada
Recipient: Kathleen Smoak, Ph.D. (Biologist)
- 2009 Oral presentation: 'ABCG1, a Negative Regulator of Pulmonary Innate Immunity'
American Thoracic Society International Conference 2009
Recipient: David Draper, Ph.D. (Postdoctoral fellow)
- 2009 Oral presentation: 'ABCG1 is a Negative Regulator of Pulmonary Host Defense'
NIH Research Festival, Bethesda, MD
Recipient: David Draper, Ph.D. (Postdoctoral fellow)
- 2009 Fellows Award for Research Excellence, NIH
Recipient: Suraj Dhungana, Ph.D. (Postdoctoral fellow)
- 2010 Fellows Award for Research Excellence, NIH
Recipient: David Draper, Ph.D. (Postdoctoral fellow)
- 2010 Fellows Award for Research Excellence, NIH
Recipient: Jim Aloor, Ph.D. (Postdoctoral fellow)
- 2010 Oral presentation: 'MyD88 Couples Cholesterol Transport to Inflammation'
LIPID MAPS Meeting 2010; Scripps Seaside Forum – UCSD, La Jolla, CA
Recipient: Kathleen Smoak, Ph.D. (Biologist)
- 2011 Fellows Award for Research Excellence, NIH
Recipient: David Draper, Ph.D. (Postdoctoral fellow)
- 2011 Fellows Award for Research Excellence, NIH
Recipient: Jim Aloor, Ph.D. (Postdoctoral fellow)
- 2012 Fellows Award for Research Excellence, NIH
Recipient: Saiful Chowdhury, Ph.D. (Postdoctoral fellow)
- 2012 Oral presentation: 'Lrch4, a novel regulator of TLR pathways'
99th Annual Meeting, American Association of Immunologists (AAI), Boston, MA
Recipient: Jim Aloor, Ph.D. (Postdoctoral fellow)
- 2012 Best Poster Presentation
NIEHS Science Day
Recipient : Kymberly Gowdy, Ph.D. (Postdoctoral fellow)

- 2012 Semifinalist in both 2013 Intel Science Talent Search and 2013 Siemens Competition in Math, Science and Technology
Recipient : William Ge (summer student)
- 2013 Fellows Award for Research Excellence, NIH
Recipient: Julie Lowe, Ph.D. (IRA Postdoctoral fellow)
- 2013 First Place, Postdoctoral Fellow Poster Competition
Visiting Pulmonary Scholars Symposium, UNC Friday Center
Recipient : Kymberly Gowdy, Ph.D. (Postdoctoral fellow)
- 2013 Awardee, UNC Program in Translational Medicine (\$10,000 stipend)
Recipient : Michael Henderson (graduate student)
- 2014 Best Poster Presentation from Graduate Student
Retreat, UNC Toxicology Curriculum, UNC Friday Center
Recipient : Michael Henderson (graduate student)
- 2014 Second Place, Postdoctoral Fellow Poster Competition
Visiting Pulmonary Scholars Symposium, UNC Friday Center
Recipient : Kymberly Gowdy, Ph.D. (Postdoctoral fellow)
- 2014 Oral presentation: 'SR-BI in Integrated Pulmonary Innate Immune Response'
American Thoracic Society International Conference, San Diego, CA
Recipient: Kymberly Gowdy, Ph.D. (Postdoctoral fellow)
- 2015 Best Poster Presentation (pre-doctoral category)
Visiting Pulmonary Scholars Symposium, UNC Friday Center
Recipient : Michael Henderson (graduate student)
- 2015 Oral presentation: 'A Novel Role for Irgm1 in Immune Homeostasis'
Annual Meeting, American Association of Immunologists (AAI), Boston, MA
Recipient: Kathleen Azzam, Ph.D. (Biologist)
- 2015 Oral presentation: 'TNFAIP8 regulates cancer cell biology'
Annual Meeting, American Association of Immunologists (AAI), Boston, MA
Recipient: Julie Lowe, Ph.D. (Postdoctoral fellow)
- 2015 AAI Trainee Abstract Award
Recipient: Julie Lowe, Ph.D. (Postdoctoral fellow)
- 2015 Poster Award
NIEHS Science Day
Recipient: Julie Lowe, Ph.D. (Postdoctoral fellow)
- 2016 Fellows Award for Research Excellence, NIH

- Recipient: Julie Lowe, Ph.D. (Postdoctoral fellow)
- 2016 Fellows Award for Research Excellence, NIH
Recipient: Kristin Gabor, Ph.D. (Postdoctoral fellow)
- 2016 Oral presentation and travel award
Annual Meeting, American Association of Immunologists (AAI), Seattle, WA
Recipient: Kristin Gabor, Ph.D. (Postdoctoral fellow)
- 2017 Oral presentation
Smith-Lemli-Opitz Scientific Conference, Cincinnati, OH
Recipient: Kristin Gabor, Ph.D. (Postdoctoral fellow)
- 2017 Abstract award
AAI Assembly, American Thoracic Society International Conference
Recipient: Prashant Rai, Ph.D. (Postdoctoral fellow)
- 2017 Graduate Fellowship, Triangle Center for Evolutionary Medicine
Recipient: Teminioluwa Ajayi (Medical student / pre-doctoral fellow)
- 2017 Minority Trainee Development Scholarship Award
American Thoracic Society
Recipient: Teminioluwa Ajayi (Medical student / pre-doctoral fellow)
- 2017 Outstanding Poster, NIH Postbac Poster Day
Recipient : Emily Mesev (Postbac fellow)

VIII. Professional Affiliations

American Thoracic Society
NIH Translational Research Interest Group
Society for Leukocyte Biology

IX. Professional Service and Committees

Extramural

- 2003-2006 Member, University Hospital Critical Care Committee, University of Colorado School of Medicine, Denver, CO
- 2003, '04, '08 Chair, Functional Genomics and Proteomics Poster Discussion Session
American Thoracic Society International Conference
- 2004 Chair, Symposium: 'Recharting Ancient Pathways: Proteomics, the Next Frontier of Inflammation Research', American Thoracic Society International Conference

- 2005-2006 Member, Credentialing Committee
National Jewish Medical and Research Center, Denver, CO
- 2008-2011 Member, Program Committee, Respiratory Cell and Molecular Biology Assembly
American Thoracic Society
- 2008- Consultant on extramural R01 award
HL94525 to Dr. John S. Parks (Wake Forest University)
- 2009 Chair, 'Unusual Suspects: New Roles for Old Lipids in Lung Disease & Critical
Illness' Scientific Symposium , American Thoracic Society International Conference
- 2010 Chair, 'Molecular Phenotypes: Bench to Bedside Diagnosis' Scientific Symposium
American Thoracic Society International Conference
- 2010 Lead Facilitator, Thematic Poster Session: 'Regulating Cell Growth and Survival',
American Thoracic Society International Conference
- 2010-2012 Member, Environmental Health Policy Committee, American Thoracic Society
- 2011 Chair, Poster Discussion Session: 'NF-kB: Regulation and Exploitation'
American Thoracic Society International Conference
- 2011 Chair, 'Damage-associated Molecular Patterns in Lung Disease and Critical Illness
Scientific Symposium, American Thoracic Society International Conference
- 2011 Facilitator, Thematic Poster Session: 'Systems Biology and Molecular Profiling'
American Thoracic Society International Conference
- 2011 Facilitator, Thematic Poster Session: 'Airway Immune Mechanisms and
Inflammation', American Thoracic Society International Conference
- 2012- Associate Mentor, Training Grant NHLBI T-32 091797; Integrative Lipid Sciences,
Inflammation, and Chronic Disease Training Program; Wake Forest University
- 2012 Facilitator, Thematic Poster Session: 'Recent Advances in Phagocyte Biology'
American Thoracic Society International Conference
- 2013 Facilitator, Poster Discussion Session: 'Airway Epithelial Activation and Dysfunction'
American Thoracic Society International Conference
- 2013 Consultant on extramural R01 application
'The Role of Lumican in the Cornea,' to National Eye Institute, by Dr. Shukti
Chakravarti, Johns Hopkins University School of Medicine
- 2013 Consultant on extramural foundation grant application

'Novel Lipoproteins and Risk of Asthma in the Women's Health Study,' to American Asthma Foundation, by Dr. Samia Mora, Brigham and Women's Hospital

2013-present Working Group on Metabolomics and Proteomics, Assembly on Respiratory Cell & Molecular Biology, American Thoracic Society

2013 Moderator, Obesity and Host Defense Session
Obesity and Metabolism: An Emerging Frontier in Health and Disease Meeting
University of Vermont, Burlington, VT

2014-present Member, Planning Committee; Asthma, Inflammation, and Immunology Assembly
American Thoracic Society

2014 Facilitator, Thematic Poster Session: 'Asthma: Preclinical Studies'
American Thoracic Society International Conference

2014-present Member, Steering Committee, Visiting Pulmonary Scholar Program

2015 Chair/Moderator, Course at AAAAI Annual Meeting: 'NIEHS: Emerging Roles for Cholesterol Dysregulation and its Treatment in Lung Disease', Houston, TX

2015 Chair, NIEHS Scientific Symposium, American Thoracic Society International Conference

2015-present Member, Executive Committee, Curriculum in Toxicology
University of North Carolina Chapel Hill

2015 Co-chair of 'Lipid Mediators' symposium
48th Annual Meeting of the Society for Leukocyte Biology, Raleigh, NC

2016 Chair, 'Emerging Immune Functions of the Pulmonary Epithelium' Scientific Symposium, American Thoracic Society International Conference

2017- Member, Program Committee; Allergy, Immunology & Inflammation Assembly
American Thoracic Society

Intramural (NIEHS/NIH)

2006-2007 Member, Training and Education Committee

2007-2011 Member, Institutional Review Board

2007-present Medical Officer, Mechanisms of Susceptibility to Oxidant Stress-Induced Disease Program, Director's Challenge Program

- 2008-present Member, Clinical Advisory Council
- 2008 Meeting Organizer and Chair, NIEHS Symposium on Lipid Raft Biology
- 2007-present Poster Judge, Science Day
- 2008 Host, Distinguished Lectureship Program, May, 2008
Speaker: Dr. Kai Simons (Director Emeritus, Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany)
- 2008, 2012 Panelist, Fellows Grantsmanship Course
- 2009, '10, '13 Panelist, Summers of Discovery Career Panel
- 2010 Organizer, Laboratory of Respiratory Biology Retreat
- 2010-2013 Member, Committee on Promotions III (COP III)
- 2011 Member, DIR Pulse Action Plan Committee
- 2011 Member, NIEHS Strategic Planning Stakeholder Community Workshop
- 2011 Member, NIEHS Clinical Research Support Services Contract Review Panel
- 2011-2015 Member, NIEHS Alion Inhalation Facility Oversight Committee
- 2012-2014 Councilor (elected position), NIEHS Assembly of Scientists Council
- 2012 Member, CRU Staff Clinician Search Committee, NIEHS
- 2012- Member, NIH Center for Human Immunology
- 2012, 2013 Member, NIH Stadtman Immunology Committee
- 2012 Chair, Pulmonary/Cardiovascular Disease Subcommittee
NIEHS Inflammation Cross-Divisional Implementation Committee
- 2012 Member, DIR Retreat Planning Committee
- 2013 Judge, NIH Fellows Award for Research Excellence (FARE) Travel Award Competition
- 2013 Member, Selection Panel for Administrative Coordination Specialist, DIR
- 2014- Member, Cross-Divisional Inflammation Evaluation Design Team
- 2014 Member, DIR Intramural Research Program Review Group

- 2014 Member, Targeted Tenure Track Investigator Search Committee
- 2014- Member, NIEHS Pathology Core Committee
- 2014- Member, NIEHS Environmental Polymorphisms Registry Steering Committee
- 2014- Co-Chair, Epidemiology Branch Tenure Track Investigator Search Committee
- 2014- Member, DIR Space and Renovations Advisory Committee
- 2014- Member, Committee on Promotions I (COP I)
- 2014- Member, Steering Committee, NIEHS Inflammation Faculty
- 2014- Member, Planning Committee, NIEHS Inflammation Workshop
- 2015 Member, Neurobehavioral Facility Head-Staff Scientist Search Committee
- 2015 Chair, Planning Committee, NIEHS DIR Retreat
- 2015- Member, NIEHS Fluorescence Imaging Core Facility Advisory Committee
- 2016- Member, Staff Pathologist Search Committee, NTP
- 2016 Acting Chair, STL Staff Scientist Search Committee
- 2016- Chair, NIEHS Conventional Animal Facility Steering Committee
- 2017- Member, Steering Committee, NIH Inflammatory Disease Interest Group

X. Review and Referee Activities

Editorial Boards:

Academic Editor, *PLoS ONE* (2010 – present)

Member, Editorial Board, *Am. Journal of Respiratory Cell and Molecular Biology* (2014-present)

Faculty Member, *Faculty of 1000 Medicine* (2010 – present)

Ad hoc journal reviewer:

Blood, Cell Metabolism, Cell Host & Microbe, Journal of Immunology, American Journal of Respiratory and Critical Care Medicine, Journal of Biological Chemistry, Journal of the American Medical Association, PLoS ONE, PLoS Computational Biology, PLoS Genetics, Journal of Leukocyte Biology, American Journal of Respiratory Cell and Molecular Biology, Journal of Proteome Research, Proteomics, Environmental Health Perspectives Toxicological Sciences, Biochemical Pharmacology, Physiological Genomics, Journal of Pediatrics

Occupational and Environmental Medicine, Clinical & Experimental Allergy, Journal of Pharmacology and Experimental Therapeutics, Molecular Therapy – Nucleic Acids, Journal of Allergy & Clinical Immunology, Journal of the American College of Cardiology, BBA Biomembranes, Journal of Innate Immunity, Lancet Respiratory Medicine, Scientific Reports, JCI

Study Sections

- 2012 American Thoracic Society Foundation research review
Jersey City, NJ
- 2015, 2016 Reviewer, Biomedical Advanced Research & Development Authority, DHHS

Ad hoc grant application reviewer:

- 2004 Peer-Reviewed Medical Research Program
U.S. Department of Defense
- 2004 Cystic Fibrosis Pilot Grant Program
Toronto Hospital for Sick Children
- 2006 Pilot/Feasibility Grant
Yale Skin Diseases Research Core Center
- 2007 Integrated Laboratory Systems, Inc.
Project Concept Review N11
- 2010 Chilean National Science and Technology Research Fund (FONDECYT; Chile)
FONDECYT National Research Funding Competition
- 2011 Standard Proposal
Biotechnology and Biological Sciences Research Council (U.K.)
- 2013- National Peer Reviewer
Arizona Biomedical Research Commission
- 2014 Reviewer, Research Fellowship, Sigma Delta Epsilon/Graduate Women in Science
- 2014-present Scientific Reviewer, Intramural Loan Repayment Program
- 2014 Reviewer, National Jewish Hospital Challenge Grant Program
- 2014 Reviewer, Director's Investigator Awards Program, NICHD/NIH

XI. Teaching/Training Activities

- 2001-2004 Teaching Assistant, Pulmonary Pathophysiology Course, University of Colorado School of Medicine
- 2002 Founding Contributor/Author, The MGH Primary Care Syllabus. Lippincott, Williams & Wilkins. 2002.
- 2002-2006 Attending Physician, Pulmonary Consult Service, Intensive Care Unit
Denver Health Medical Center, Denver, CO
- 2002-2006 Attending Physician, Pulmonary Consult Service, University Hospital, Denver, CO
- 2003-2004 Lecturer, Management of Acute Respiratory Distress Syndrome
Critical Care Conference Series, Fellowship in Pulmonary and Critical Care
Medicine, University of Colorado School of Medicine
- 2003-2004 Lecturer, Respiratory and Hemodynamic Mechanics of the Ventilated Patient
Critical Care Conference Series
Fellowship in Pulmonary and Critical Care Medicine
University of Colorado School of Medicine
- 2003-present Literature Reviewer
Practical Reviews in Critical Care Medicine, Oakstone Medical Publishing.
- 2004-2005 Chiron Bronchiectasis and Ventilator-Associated Pneumonia Training Program
Speaker, 'Ventilator-Associated Pneumonia: A Pulmonologist's Perspective'
- 2004-2006 Attending Physician, Pulmonary Fellows Clinic
National Jewish Medical and Research Center, Denver, CO
- 2007, 2008, 2012, 2014 Mentor
Summers of Discovery Program, NIEHS
- 2007-present Attending Physician – Medical Intensive Care Unit; Pulmonary Consult Service
Durham Veterans Affairs Medical Center, Durham, NC
- 2010-2013 Member, Graduate Thesis Committee
Student: Caleb Lord (Wake Forest University, Department of Pathology)
- 2014- Member, Graduate Thesis Committee
Student: Matthew McPeck (East Carolina University, Department of Toxicology)
- 2015- Member, Graduate Thesis Committee
Student: Adam Speen (University of North Carolina, Toxicology Curriculum)

XII. Talks at National/International Research Meetings

- 2001 A Proteomic Analysis of Lipopolysaccharide Stimulation of the Human Neutrophil. Aspen Lung Conference, Aspen, CO
- 2002 Cholesterol Content Affects Inflammatory Potential of the Neutrophil. American Thoracic Society International Conference
- 2003 A Practical Introduction to Proteomic Analysis (invited speaker)
Post-Graduate Course: "The Whole World Genomics Do-it-Yourself Course"
American Thoracic Society International Conference
- 2003 Genomic and Proteomic Profiling of the Lipopolysaccharide-Stimulated Human Neutrophil (invited speaker), Pittsburgh International Lung Conference
- 2004 Proteomic Approaches to the Study of Signal Transduction and Inflammation. 'Sunrise Seminar', American Thoracic Society International Conference
- 2005 Liver X Receptor Regulates Pulmonary Innate Immunity
Minisymposium, American Thoracic Society International Conference
- 2006 Proteomic Approaches to the Study of Signal Transduction and Inflammation. 'Sunrise Seminar', American Thoracic Society International Conference
- 2006 A Dual Role for RhoA in Activation of the Human Neutrophil (invited speaker)
Grover Conference on the Pulmonary Circulation, Deckers, CO
- 2007 Proteomic Approaches to the Study of Signal Transduction and Inflammation. 'Sunrise Seminar', American Thoracic Society International Conference
- 2009 Cholesterol, a Novel Modifier of Airways Disease: Lessons from Mouse & Man
Scientific Symposium, American Thoracic Society International Conference
- 2009 Proteomic Discovery and Functional Validation of Rafts in Inflammation Biology
'Allergy as a mechanism-based case study to apply omics in food and chemicals safety assessment' Workshop (invited speaker)
European Commission Joint Research Centre; Ispra, Italy
- 2010 Proteomic Profiling Reveals New Biology in Macrophage Innate Immune Response
Scientific Symposium, American Thoracic Society International Conference
- 2010 Lipids/Cholesterol in Acute Lung Injury (invited speaker)
Scientific Symposium, American Thoracic Society International Conference
- 2011 Coupling Between Cholesterol and Innate Immunity at the Plasma Membrane
Scientific Symposium, American Thoracic Society International Conference

- 2011 MyD88 couples reverse cholesterol transport to inflammation (invited speaker)
Gordon Research Conference on Atherosclerosis; Salve Regina University,
Newport, RI
- 2013 APOE4 is associated with enhanced innate immune responses and sepsis severity
in humans, Gordon Research Conference on Vascular Cell Biology, Ventura, CA
- 2015 A Role for Cholesterol-25-hydroxylase in Resolution of Pulmonary Neutrophilia.
American Academy of Allergy, Asthma, and Immunology Annual Meeting
Houston, TX
- 2015 p53 as integrator of environmental inputs to inflammation
NIEHS Symposium, American Thoracic Society International Conference
- 2015 A Role for Cholesterol-25-hydroxylase in Resolution of Pulmonary Neutrophilia
Scientific Symposium, American Thoracic Society International Conference
- 2015 SR-BI in the integrated pulmonary host defense response
Scientific Symposium, American Thoracic Society International Conference
- 2015 A novel role for oxysterols in resolution of neutrophilia
48th Annual Meeting of the Society for Leukocyte Biology, Raleigh, NC

Miscellaneous Invited Research Talks

- 2002 A Proteomic Analysis of Lipopolysaccharide Stimulation of the Human Neutrophil.
Immunology Research in Progress Seminar, NJMRC
- 2003 A Role for Lipid Rafts in Lipopolysaccharide Signal Transduction in the Human
Neutrophil, Cardiovascular Research Conference, Cardiology Division, UCHSC
- 2003 Functional Proteomics of LPS-induced TNF- α Production by the Human Neutrophil
Pulmonary Research Conference, Duke University Medical Center
- 2004 A Novel Role for Hydroxymethyl-Glutaryl Coenzyme A in LPS-Induced Acute Lung
Injury, Denver Health Medical Center Critical Care Grand Rounds
- 2004 Functional Proteomics of LPS-induced TNF- α Production by the Human Neutrophil
University of Colorado Proteomics Center
- 2006 A Novel Role for Cholesterol in Innate Immunity Signaling
Department of Pathology, Wake Forest University
- 2008 Global Proteomics and Relative Quantification in Toxicology
Winter Symposium, RTP Drug Metabolism Discussion Group

North Carolina Biotechnology Center

- 2008 Innate Immunity as a Physiologic Signal in Cholesterol Homeostasis
Pulmonary Research Conference, Duke University Medical Center
- 2008 Dyslipidemia Modulates Pulmonary Innate Immunity: Studies in Mouse & Man
Airway Biology Seminar Series, Duke University Medical Center
- 2008 MyD88 Couples Reverse Cholesterol Transport to Inflammation
Symposium on Lipid Raft Biology, NIEHS
- 2008 Quantitative Proteomic Analysis of Macrophage Lipid Rafts Reveals a Role for the
Proteasome in Compartmentalized Activation of ERK
Laboratory of Pharmacology / Laboratory of Molecular Toxicology, NIEHS
- 2008 Environmental and Genetic Dyslipidemia Modulate Pulmonary Innate Immunity
Cystic Fibrosis Center, University of North Carolina
- 2009 Emerging Roles for Cholesterol in Pulmonary Innate Immunity
Dept. of Immunology, Duke University
- 2009 A Novel Complex Role for Cholesterol in Pulmonary Innate Immunity
Dept. of Microbiology, North Carolina State University
- 2009 MyD88 Couples Reverse Cholesterol Transport to Inflammation
Dept. of Pathology, Wake Forest University
- 2009 MyD88 Couples Cholesterol Trafficking to Innate Immunity
Laboratory of Signal Transduction, NIEHS
- 2010 Emerging Roles for Cholesterol in Pulmonary Innate Immunity
Pulmonary and Vascular Medicine Branch, NHLBI, NIH, Bethesda, MD
- 2010 Cholesterol in Asthma: Bench to Bedside Insights
NIH Research Festival, Bethesda, MD
- 2010 S-Acylproteomics of the Macrophage Reveals a Role for Palmitoylation in
Mitochondrial Targeting of Plscr3
NIH Research Festival, Bethesda, MD
- 2010 Novel Roles for Cholesterol in Pulmonary Host Defense
University of Vermont Lung Center
- 2010 Animal Models of Environmental Endotoxin Exposure
Evaluating Health Effects to Communities of Confined Animal Feeding Operations
North Carolina State University

- 2011 Tumor Suppressor p53 Integrates Host Defense and Cell Fate During Pneumonia
Duke University Airway Biology Forum
- 2011 Effects of Cholesterol on Pulmonary Inflammation (invited speaker)
Fall 2011 Pulmonary Research Group Symposium, Stowe, VT
- 2012 Cholesterol as a Novel Modifier of Lung Immunity
Grand Rounds, NIH Clinical Center, Bethesda, MD
- 2012 Tumor Suppressor p53 Integrates Host Defense and Cell Fate
Lung Research Conference, Division of Pulmonary and Critical Care Medicine
Johns Hopkins School of Medicine
- 2012 Tumor Suppressor p53 Integrates Host Defense and Cell Fate
Molecular & Cellular Immunology Shock/Trauma Research Center
University of Missouri Kansas City Medical School
- 2012 Cholesterol Trafficking Modifies Pulmonary Immune Responses
Division of Pulmonary, Critical Care, and Sleep Medicine
Brody School of Medicine, East Carolina University
- 2012 Tumor Suppressor p53 Integrates Host Defense and Cell Fate
Division of Pulmonary, Allergy, Critical Care, and Sleep Medicine
Ohio State University
- 2013 Tumor Suppressor p53 Integrates Host Defense and Cell Fate
Departments of Pathobiological Sciences and Comparative Biomedical Sciences
School of Veterinary Medicine, Louisiana State University
- 2013 SR-BI in the Integrative Physiology of Bacterial Pneumonia
University of Vermont Obesity Conference, Burlington, VT
- 2013 Tumor Suppressor p53 Integrates Host Defense and Cell Fate
NCSU Workshop on Allergy and Inflammation; NCSU McKimmon Center
Center for Comparative Medicine and Translational Research, NCSU
Raleigh, NC
- 2014 APOE4 as a determinant of the human innate immune response
NIEHS Clinical Research Unit 'TED' talk
- 2014 APOE4 as a determinant of the human innate immune response
Rx for Science Literacy Workshop, NC Association for Biomedical Research
- 2014 A Bench to Bedside Study of APOE4 in the human innate immune response
142nd Meeting of the National Advisory Environmental Health Sciences Council

- NIEHS, Research Triangle Park, NC
- 2014 A role for cholesterol 25-hydroxylase in resolution of alveolar neutrophilia
NIH Cytokine Interest Group Lipid Mediators in Inflammation & Disease Meeting
NIH, Bethesda, MD
- 2014 Role of SR-BI in the integrated host defense response during pneumonia
Receptor Mechanisms Discussion Group, NIEHS
- 2015 Novel roles for oxysterols in resolution of inflammation and critical illness
Signal Transduction Laboratory Seminar Series
NIEHS
- 2015 The pulmonary host defense response
Toxicology Curriculum seminar series, University of North Carolina
- 2015 Oxysterols in resolution of lung inflammation
North Carolina State University Toxicology Program Seminar Series; Raleigh, NC
- 2015 Oxysterols as mediators and biomarkers of inflammation resolution
University of Vermont Obesity Conference; Burlington, VT
- 2016 Novel roles for oxysterols in resolution of inflammation
NIH Immunology Interest Group Seminar Series, NIH main campus, Bethesda, MD
- 2016 Oxysterols in resolution of inflammation
Seminar Series, Pulmonary Division, National Jewish Hospital, Denver, CO
- 2016 Proteomic analysis of cellular signaling
Proteomics & Metabolomics Workshop, National Jewish Hospital, Denver, CO
- 2016 Novel roles for oxysterols in resolution of inflammation
Seminar Series, Dept. of Microbiology & Immunology, Wake Forest University
- 2016 Keynote speaker
Duke University Innate Immunity Symposium
- 2016 Oxysterols in resolution of inflammation
Metabolism & Pathogens Symposium, Rocky Mountain Laboratories, NIAID/NIH,
Hamilton, MT
- 2017 Transatlantic Airway Conference
Lucerne, Switzerland
- 2017 NIH Inflammatory Diseases Interest Group Seminar Series
NIH Main Campus, Bethesda, MD

XIII. Research Grants, Contracts, and Special Grants**A. Previous Research Grant Support****AHA # 0275035N****American Heart Association - Michael Fessler, Principal Investigator**

"Modulation of Inflammation by Cholesterol and HMG Co-A Reductase Inhibitors: Role of the Lipid Raft"

Total Award Period - 7/1/02 - 6/30/06 \$593,000

Atorvastatin Research Awards Program**Pfizer – Michael Fessler, Principal Investigator**

"A Novel Therapeutic Role for Statins in Acute Lung Injury: Targeting the Neutrophil Cytoskeleton"

Total Award Period – 7/04 – 6/06 \$100,000

Andrew Goodman Research Fellowship Award

2001

National Jewish Medical and Research Center

Individual National Research Service Award [declined]

2002

B. Current Support**NIH 1 Z01 ES102005**

2006-present

'Cell Signaling of Host Defense' (NIEHS Intramural Research Program)

Intramural Research Award

2010-2013

NIEHS Intramural Research Program

XIV. Bibliography**Original Scientific Manuscripts**

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11. Jeyaseelan S, Young SK, **Fessler MB**, Liu Y, Malcolm KC, Yamamoto M, Akira S, and Worthen GS. TRIF-Mediated Signaling Contributes to Innate Immune Responses in the Lung During *Escherichia coli* Pneumonia. *Journal of Immunology* 2007; 178(5):3153-60.
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2. **Fessler MB**, Nick JA. Cellular signaling. Textbook of Critical Care, Eds. Fink, Abraham, Vincent, Kochanek, 5th ed., Elsevier Saunders 2005.
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Case Reports

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