CURRICULUM VITAE

June, 2011 update

MICHAEL B. FESSLER, M.D.

I. Personal History

Present Position Rank: Clinical Investigator, Group Leader – Host Defense
Laboratory of Respiratory Biology, 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
2002 Pulmonary Medicine
2004 Critical Care Medicine

Medical Licensure
Colorado 1999-2007
North Carolina 2006-present

III. Research Training

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

1993 Renal Division, Brigham & Women's Hospital, Boston
Utilized differential display-PCR technique to characterize a mouse model for polycystic kidney disease.

1999 Massachusetts General Hospital, Boston
Analyzed magnetic resonance spectroscopy data and physiologic parameters to study skeletal muscle ventilatory chemoreflex.

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

IV. Professional Positions

2006-present 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

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, Madenspacher J, Jeyaseelan S, Williams B, Poch KR, Dixon D, Nick JA, Worthen GS, **Fessler MB**. Liver X Receptor Regulates Pulmonary Innate Immunity. *Journal of Immunology* 2008; 180(5):3305-12.

2009 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, June)
Dhungana S, Merrick BA, Tomer KB, **Fessler MB**. Quantitative Proteomic Analysis of Macrophage Rafts Reveals Compartmentalized Activation of the Proteasome and of Proteasome-mediated ERK Activation in Response to Lipopolysaccharide. *Molecular & Cellular Proteomics* 2009; 8(1):201-213.

2010 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, August)
Smoak KA, Aloor JJ, Madenspacher JH, Merrick BA, Collins JB, Zhu X, Cavigiolio G, Oda MN, Parks JS, **Fessler MB**. Myeloid Differentiation Primary Response Protein 88 Couples Reverse Cholesterol Transport to Inflammation. *Cell Metabolism* 2010; 11(6):493-502.

2010 Intramural Research Paper of the Month, NIEHS (*Environmental Factor*, Sept.)
Madenspacher JH, Draper DW, Smoak KA, Li H, Griffiths GL, Suratt BT, Wilson MD, Rudel LL, **Fessler MB**. Dyslipidemia induces opposing effects on intrapulmonary and extrapulmonary host defense through divergent TLR response phenotypes. *Journal of Immunology* 2010; 185(3):1660-9.

2010 Intramural Research Award
NIEHS, NIH, DHHS

VI. Patents

Provisional Patent Application #61/443,491: 'Modulation of Lrch4 activity and Therapeutic Application Thereof' (filed January 17, 2011; inventors: Michael B. Fessler, Jim J. Aloor)

VII. Postdoctoral Trainees

1/07 – 12/08 Suraj Dhungana, Ph.D.
Current Position: Scientist, Enthalpy Analytical, Inc., Durham, NC

9/07 – 1/11 David Draper, Ph.D.

10/07 – present Jim J. Aloor, Ph.D.

12/09 – present Saiful Chowdury, Ph.D.

5/10 – present Julie Lowe, Ph.D.

5/11 – present Kymberly Gowdy, Ph.D.

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)

VIII. Professional Affiliations

American Thoracic Society
NIH Translational Research Interest Group
Society of Clinical and Translational Science

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
San Diego, CA

2010 Chair
'Molecular Phenotypes: Bench to Bedside Diagnosis' Scientific Symposium
American Thoracic Society International Conference
New Orleans, LA

2010 Lead Facilitator
Thematic Poster Session: 'Regulating Cell Growth and Survival: Apoptosis, Survival and Senescence'
American Thoracic Society International Conference

2010-present 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

Intramural (NIEHS)

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 Panelist
Fellows Grantsmanship Course

2009, 2010 Panelist
Summers of Discovery Career Panel

2010 Organizer
Laboratory of Respiratory Biology Retreat

2010- Member
Search Committee, Director of Clinical Research

2010- Member
Committee on Promotions III (COPIII)

2011- Member
DIR Pulse Action Plan Committee

X. Review and Referee Activities

Editorial Boards:
Academic Editor, *PLoS ONE* (2010 – present)
Faculty Member, Faculty of 1000 Medicine (2010 – present)

Ad hoc journal reviewer:
Blood
Cell Metabolism
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

Journal of Leukocyte Biology
Journal of Clinical Anesthesia
American Journal of Respiratory Cell and Molecular Biology
Journal of Proteome Research
Critical Care
Proteomics
Journal of Neurochemistry
Environmental Health Perspectives
Toxicological Sciences
Biochemical Pharmacology
Physiological Genomics
Journal of Pediatrics
Occupational and Environmental Medicine
ACP Medicine
Clinical & Experimental Allergy

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 N114
'Pulmonary fibrogenic potential of single walled carbon nanotubes in rats and the effects of pre-exposure to bacterial endotoxin'. PI: Mark Cesta

2010 Chilean National Science and Technology Research Fund (FONDECYT; Chile)
FONDECYT National Research Funding Competition

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 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 Member, Graduate Thesis Committee
Student: Caleb Lord (Wake Forest University, Department of Pathology)

XII. Talks at International Research Meetings

2001 A Proteomic Analysis of Lipopolysaccharide Stimulation of the Human Neutrophil.
Aspen Lung Conference, Aspen, CO

2002 Cholesterol Content Affects MAP Kinase Activation and 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

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: Activation of Cdc42
Cardiovascular Research Conference, Cardiology Division, UCHSC

2003 Functional Proteomics Reveals a Novel Regulatory Role for RhoA in Lipopoly-saccharide-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 Lipopolysaccharide-Induced Acute Lung Injury
Denver Health Medical Center Critical Care Grand Rounds

2004 Functional Proteomics Reveals a Novel Regulatory Role for RhoA in Lipopoly-saccharide-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 Palmitoylproteomics 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
University of Vermont Lung Center

2012 NIH Clinical Center Grand Rounds (scheduled for Feb., 2012)
From Alzheimer Disease to Critical Illness: Role of *APOE4* in Sepsis

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-present
NIEHS Intramural Research Program

XIV. Bibliography

Original Scientific Manuscripts

1. Wang TJ, Mort EA, Nordberg P, Chang Y, Cadigan ME, Mylott L, Ananian LV, Thompson BT, **Fessler M**, Warren W, Wheeler A, Jordan M, Fifer MA. Utilization Management Intervention to Reduce Unnecessary Testing in the Coronary Care Unit. *Archives of Internal Medicine* 2002; 162(16):1885-90.

2. **Fessler MB**, Malcolm KC, Duncan MW, Worthen GS. A Genomic and Proteomic Analysis of Activation of the Human Neutrophil by Lipopolysaccharide and Its Mediation by p38 Mitogen-activated Protein Kinase. *Journal of Biological Chemistry* 2002; 277(35):31291-31302.

3. **Fessler MB**, Malcolm KC, Duncan MW, Worthen GS. New Experimental Approaches to the Signaling of Innate Immunity. *American Journal of Respiratory Cell and Molecular Biology* 2004; 31(Supp):S62-66.

4. Frasch SC, Henson PM, Nagaosa K, **Fessler MB**, Borregaard N, Bratton L. Phospholipid Flip-Flop and Phospholipid Scramblase (PLSCR 1) Co-localize to Uropod Rafts in fMLP Stimulated Neutrophils. *Journal of Biological Chemistry* 2004; 279:17625 – 17633.

5. **Fessler MB**, Arndt PG, Frasch SC, Lieber JG, Bratton DL, Malcolm KC, Worthen GS. Lipid Rafts Regulate Lipopolysaccharide-Induced Activation of Cdc42 and Inflammatory Functions of the Human Neutrophil. *Journal of Biological Chemistry* 2004; 279:39989 – 39998. (Corresponding author)

6. Walker TS, Worthen GS, Poch KR, Lieber JG, Saavedra MT, Malcolm KC, **Fessler MB**, Vasil ML, Nick JA. Enhanced Pseudomonas aeruginosa biofilm development mediated by human neutrophils. *Infection & Immunity* 2005; 73(6):3693-701

7. Arndt PG, Young SK, Lieber JG, **Fessler MB**, Nick JA, Worthen GS. Systemic inhibition of c-Jun-NH2-Terminal Kinase Decreases Pulmonary Neutrophil Recruitment and Modulates Actin Assembly after LPS Exposure. *American Journal of Respiratory and Critical Care Medicine* 2005; 171:978-986

8. **Fessler MB**, Young SK, Arndt PG, Walker T, Palic MR, Lieber JG, Jeyaseelan S, Nick JA, Worthen GS. A Role for HMG-CoA Reductase in Pulmonary Inflammation and Host Defense. *American Journal of Respiratory and Critical Care Medicine* 2005; 171:606-615. (Corresponding author)

9. Morimoto K, Janssen WJ, **Fessler MB**, McPhillips KA, Borges VM, Bowler RP, Xiao YQ, Kench JA, Henson PM, Vandivier RW. Lovastatin Enhances Clearance of Apoptotic Cells (Efferocytosis) with Implications for Chronic Obstructive Pulmonary Disease. *Journal of Immunology* 2006; 176(12):7657-65

10. Cha SI, **Fessler MB**, Cool CD, King TE, Brown KK. Lymphoid Interstitial Pneumonia: Clinical Features, Associations, and Prognosis. *European Respiratory Journal* 2006; 28(2):364-9

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.

12. **Fessler MB**, Arndt PG, Nick JA, Malcolm KC, Worthen GS. A Dual Role for RhoA in Suppression and Induction of Cytokines in the Human Neutrophil. *Blood* 2007; 109(3):1248-56. (Corresponding author)

13. Brass DM, Hollingsworth JW, **Fessler MB**, Savov JD, Maxwell AB, Whitehead GS, Burch LH, Schwartz DA. The IL-1 type 1 receptor is required for the development of LPS-induced airways disease. *Journal of Allergy and Clinical Immunology* 2007; 120(1):121-7.

14. Smoak K, Madenspacher J, Jeyaseelan S, Williams B, Poch KR, Dixon D, Nick JA, Worthen GS, **Fessler MB**. Liver X Receptor Regulates Pulmonary Innate Immunity. *Journal of Immunology* 2008; 180(5):3305-12.

15. **Fessler MB**, Massing MW, Spruell B, Jaramillo R, Draper D, Madenspacher J, Arbes S, Calatroni A, Zeldin DC. Novel Relationship of Serum Cholesterol with Asthma and Wheeze in the United States. *Journal of Allergy and Clinical Immunology* 2009; 124(5):967-74. (Corresponding author)

16. Dhungana S, Merrick BA, Tomer K, **Fessler MB**. Quantitative Proteomic Analysis of Macrophage Rafts Reveals Compartmentalized Activation of the Proteasome and of Proteasome-mediated ERK Activation in Response to Lipopolysaccharide. *Molecular & Cellular Proteomics* 2009; 8(1):201-213.

17. **Fessler MB**, Jaramillo R, Crockett PW, Zeldin DC. Relationship of Serum Cholesterol Levels to Atopy in the U.S. Population. *Allergy* 2010; 65(7):859-64. (Corresponding author)

18. Brown JM, Chung S, Sawyer JK, Degirolamo, C, Alger HM, Nguyen T, Zhu X, Duong MN, Brown AL, Shah R, Davis MA, Kelley K, Wilson MD, **Fessler MB**, Parks JS, Rudel LL. Combined Therapy of dietary Fish Oil and Stearoyl-CoA Desaturase 1 (SCD1) Inhibition Prevents the Metabolic Syndrome and Atherosclerosis. *Arteriosclerosis, Thombosis, and Vascular Biology* 2010; 30(1):24-30.

19. Mueller GA, Edwards L, Aloor J, **Fessler MB**, Pomes A, Chapman M, London RE, Pedersen LC. The Structure of the House Dust Mite Allergen Der p 7 Reveals Similarities to the Human Innate Immune Protein LBP. *Journal of Allergy and Clinical Immunology* 2010; 125(4):909-17.

20. Smoak KA, Aloor JJ, Madenspacher JH, Merrick BA, Collins JB, Zhu X, Cavigiolio G, Oda MN, Parks JS, **Fessler MB**. Myeloid Differentiation Primary Response Protein 88 Couples Reverse Cholesterol Transport to Inflammation. *Cell Metabolism* 2010; 11(6):493-502.

21. Draper DW, Madenspacher JH, King DH, Remaley AT, **Fessler MB**. ATP Binding Cassette Transporter G1 Deficiency Dysregulates Host Defense in the Lung. *American Journal of Respiratory and Critical Care Medicine* 2010; 182(3):404-12.

22. Madenspacher JH, Draper DW, Smoak KA, Li H, Suratt BT, Wilson MD, Rudel LL, **Fessler MB**. Dyslipidemia Exerts Opposing Effects on Intrapulmonary and Extrapulmonary Host Defense through Divergent TLR Response Phenotypes. *Journal of Immunology* 2010; 185(3): 1660-9.

23. Schug T, Xu Q, Draper DW, de Silva AP, Purushotham A, **Fessler MB**, Li X. SIRT1 regulates NF-κB-dependent transcription and attenuates macrophage-mediated inflammation. Molecular & Cellular Biology 2010; 30(19): 4712-21.

24. Zhu X, Owen JS, Wilson M, Thomas MJ, Hiltbold-Schwartz E, **Fessler MB**, Parks JS. Macrophage ABCA1 Dampens MyD88 Dependent Toll-Like Receptor Signaling Through

Modulation of Free Cholesterol Enrichment in Lipid Rafts. *Journal of Lipid Research* 2010; 51(11):3196-206.

25. Menendez D, Shatz M, Smoak KA, Garantziotis S, **Fessler MB**, Resnick MA. The Human Toll-like Receptor Family is Integrated into the DNA Damage and p53 Response Network. *PLoS Genetics* 2011; 7(3):e1001360.

Original Scientific Manuscripts in Progress

26. Merrick BA, Dhungana S, Aloor JJ, Peddada S, Tomer KB, **Fessler MB**. Palmitoylproteomic Profiling of the Macrophage Identifies a Role for Palmitoylation in Mitochondrial Targeting of Phospholipid Scramblase 3. *Molecular & Cellular Proteomics* (revision resubmitted)

27. Lord C, Betters JL, Ivanova PT, Milne SB, Madenspacher JH, Chung S, Liu M, Davis MA, Lee RG, Crooke RM, Graham MJ, Parks JS, Brasaemle DL, **Fessler MB**, Brown HA, Brown JM. CGI-58/ABHD5-Dervied Signaling Lipids Regulate System Inflammation and Insulin Action (submitted)

28. Kordonowy LL, Lenox CC, Burg E, Gauthier LM, Petty JM, Rincon M, Doxin AE, **Fessler MB**, Poynter ME, Suratt BT. Obesity is associated with neutrophil dysfunction and attenuation of murine acute lung injury (submitted)

29. Garantziotis S, Heise RL, Potts EN, Stober V, Cheluvaraju C, **Fessler MB**, Li Z, Kraft M, Sundy J, Wisniewski HG, Kimata K, Zhuo L, Lim YP, Schwartz DA, Foster WM, Hollingsworth JW. Hyaluronan/inter-alpha-inhibitor binding blockade abolishes airway hyperresponsiveness in asthma (submitted)

30. Jaramillo R, Cohn RD, Crockett PW, Gowdy KM, Zeldin DC, **Fessler MB**. Relationship between Objective Measures of Atopy and Myocardial Infarction in the United States (submitted)

31. Draper DW, Madenspacher JH, Wilson R, Nakano H, Cook DN, **Fessler MB**. ATP Binding Cassette transporter G1 deletion induces IL-17-dependent suppression of airway Th2 responses (submitted)

Review Articles (peer reviewed)

1. Hess DR, Medoff BD, **Fessler MB**. Pulmonary mechanics and graphics during positive pressure ventilation. *International Anesthesiology Clinics* 1999; 37(3):15-34.

2. **Fessler MB**. The Acute Abdominal Compartment Syndrome. http://www.mdconsult.com. 2002.

3. **Fessler MB**, Brown KK. Approach to the Patient with Interstitial Lung Disease. *Best Practice of Medicine.* 2002. http://www.praxis.md.

4. **Fessler MB**. Proteomics II: An Introduction to Peptide Mass Fingerprinting. *Gene Express*, October 2003. http://www.thoracic.org.

5. **Fessler MB**. Proteomics I: An Introduction to 2-Dimensional Gel Electrophoresis. *Gene Express*, August 2003. http://www.thoracic.org.

6. Arcaroli J, **Fessler MB**, Abraham E. Genetic Polymorphisms and Sepsis. *Shock* 2005; 24(4):300-12

7. **Fessler MB**. Liver X Receptor: Crosstalk Node for the Signaling of Lipid Metabolism, Carbohydrate Metabolism, and Innate Immunity. *Current Signal Transduction Therapy* 2008; 3(2):75-81.

8. Balamayooran G, Batra S, **Fessler MB**, Happel KI, Jeyaseelan S. Mechanisms of Neutrophil Accumulation in the Lungs Against Bacteria. *American Journal of Respiratory Cell & Molecular Biology* 2010; 43(1):5-16.

9. Dhungana S, **Fessler MB**, Tomer KB. Epitope Mapping by Proteolysis of Antigen-Antibody Complexes. *Methods in Molecular Biology* 2009; 524:87-101.

10. Dhungana S, **Fessler MB**, Tomer KB. Epitope Mapping by Differential Chemical Modification of Antigens. *Methods in Molecular Biology* 2009; 524:119-34.

11. **Fessler MB**, Rudel LL, Brown MA. Toll-like Receptor Signaling Links Dietary Fatty Acids to the Metabolic Syndrome. *Current Opinion in Lipidology* 2009; 20(5):3799-85.

12. **Fessler MB** and Parks JS. Intracellular lipid flux and membrane microdomains as organizing principles in inflammatory cell signaling. *Journal of Immunology* 2011 (in press)

Book Chapters

1. **Fessler MB**, Welsh C. Mechanical Ventilation: Invasive and Noninvasive. Lange Publishing, 2003.

2. **Fessler MB**, Nick JA. Cellular signaling. Textbook of Critical Care, Eds. Fink, Abraham, Vincent, Kochanek, 5th ed., Elsevier Saunders 2005.

3. Cosgrove GP, **Fessler MB**, Schwarz MI. Lymphoplasmacytic Infiltrations of the Lung. Interstitial Lung Disease. 4th Ed. Eds. Shwarz MI and King TE. B.C. Decker Inc., Hamilton-London.

Case Reports

1. **Fessler MB**, Lepore JJ, Thompson BT, Semigran MJ. Right-to-Left Shunting Through a Patent Foramen Ovale in Right Ventricular Infarction: Improvement of Hypoxemia and Hemodynamics with Inhaled Nitric Oxide. *Journal of Clinical Anesthesia* 2003; 15(5):371-4.

2. **Fessler MB**, Cool CD, Miller Y, Schwarz MI, Brown KK. Idiopathic Diffuse Hyperplasia of Pulmonary Neuroendocrine Cells in a Patient with Acromegaly. *Respirology* 2004; 9(2):274-7.

3. Friedlander AL and **Fessler MB.** A 70-year-old man with migratory pulmonary infiltrates. *Chest* 2006;130(4):1269-74.

Miscellaneous

1. **Fessler MB**, Duncan MW, Worthen GS. A Proteomic Analysis of Lipopolysaccharide Stimulation of the Human Neutrophil. *Chest* 2002; 121(3 Suppl):75S-76S.

2. **Fessler MB**, O'Brien JM, Douglas IS. Laboratory Predictors of Relative Adrenal Insufficiency in Septic Shock [Letter to Editor]. *Critical Care Medicine* 2003; 31(8):2251-2. (Corresponding author)

3. Morimoto K, Janssen WW, **Fessler MB**, McPhillips KA, Borges VM, Xiao YQ, Kench JA, Henson PM, Vandivier RW. Statins Enhance Clearance of Apoptotic Cells Through Modulation of Rho GTPases. *Proceedings of the American Thoracic Society* 2006; 3(6):516-7

4. Madenspacher JH, Smoak KA, Jeyaseelan S, Williams B, Poch KR, Nick JA, Worthen GS, **Fessler MB**. Liver X Receptor Agonists Modify Pulmonary Innate Immunity. *Proceedings of the American Thoracic Society* 2008; 5(3):366

5. **Fessler, MB.** Simvastatin as a Potential Therapeutic for Acute Respiratory Distress Syndrome [Letter to Editor]. *American Journal of Respiratory and Critical Care Medicine* 2009; 180(10):1031.

Selected Abstracts

1. Roberts DH, **Fessler M**, Packham S, Hrovat MI, Systrom DM. Skeletal Muscle Ventilatory Chemoreflex During Submaximal Exercise by ^{31}P-MRS. *American Journal of Respiratory and Critical Care Medicine* 2000;161(3):A430.

2. **Fessler MB**, Schwarz MI, King TE Jr, Brown KK. Lymphocytic Interstitial Pneumonitis vs. IPF: Comparison of Outcome, Clinical, and Physiologic Variables. *American Journal of Respiratory and Critical Care Medicine* 2001;163(5):A706.

3. Systrom DM, **Fessler M**, Packham S, Roberts D, Hrovat M, Shannon D, Kazemi H. Skeletal Muscle Ventilatory Chemoreflex in Congenital Central Hypoventilation Syndrome (CCHS). *American Journal of Respiratory and Critical Care Medicine* 2001;163(5):A267.

4. **Fessler MB**, Avdi NJ, Worthen GS. Cholesterol Content Affects MAP Kinase Activation and Inflammatory Potential of the Neutrophil. *American Journal of Respiratory and Critical Care Medicine* 2002.

5. Avdi NA, Malcolm KC, **Fessler MB**, Nick JA, Worthen GS. p38 MAPK Regulates PP2A Activity in Human Neutrophils. *American Journal of Respiratory and Critical Care Medicine* 2003; 167(7):A800

6. **Fessler MB**, Young SK, Arndt PG, Jeyaseelan S, Palic MR, Walker T, Lieber JG, Nick JA, Worthen GS. A Role for Hydroxymethyl-Glutaryl Coenzyme A Reductase in Lipopolysaccharide-Induced Acute Lung Injury. *American Journal of Respiratory and Critical Care Medicine* 2004.

7. **Fessler MB**, Malcolm KC, Arndt PG, Nick JA, Worthen GS. A Novel Role for Rho GTPases in Differential Regulation of Lipopolysaccharide-Induced Cytokines in the Human Neutrophil. *American Journal of Respiratory and Critical Care Medicine* 2005.

8. Smoak KA, Madenspacher JH, Collins J, Parks JS, Hollingsworth JH, Kathiresan S, **Fessler MB**. Innate Immunity as a Physiologic Signal in Cholesterol Homeostasis. Gordon Research Conference on Lipoprotein Metabolism, Waterville Valley, NH, 2008

9. Merrick BA, Dhungana S, Aloor JJ, Tomer KB, **Fessler MB**. Palmitoylproteomic Profiling of the Macrophage Reveals a Role for Palmitoylation in Mitochondrial Targeting of Plscr3. Gordon Research Conference on Lipoprotein Metabolism, Waterville Valley, NH, 2010

Manuscripts in Preparation

1. Madenspacher JH, Smoak KA, Draper DW, Gowdy K, Aloor JJ, Merrick BA, **Fessler MB**. Tumor suppressor p53 integrates host defense and cell fate during pneumonia in mice.