

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, Cavigliolo
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- κ B: 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- κ B-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-Derived 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, Cheluvvaraju C, **Fessler MB**, Li Z, Kraft M, Sundry 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

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