

CURRICULUM VITAE

Name: Jinming Zhao, PhD
Address: Department of Environmental & Occupational Health
Graduate School of Public Health
University of Pittsburgh
A414 Public Health
130 DeSoto Street, Pittsburgh, PA 15261
Phone: 412 383 5227
E-Mail: jiz35@pitt.edu

EDUCATION and TRAINING

UNDERGRADUATE:

1990 Nanhua University Public Health
Hunan, China

GRADUATE:

1997 Nanhua University Medicine
Hunan, China
2000 Fudan University Environmental and Occupational Health
Shanghai, China

POSTGRADUATE:

2003 - 2006 Postdoctoral Associate
Department of Environmental and Occupational Health
University of Pittsburgh, USA

APPOINTMENTS and POSITIONS

ACADEMIC:

2020,3-present	Department of Environ & Occup Health University of Pittsburgh, Pittsburgh, USA	Research Associate Professor
2018-2020.2	Department of Environ & Occup Health University of Pittsburgh, Pittsburgh, USA	Research Assistant Professor
2010 – 2018	PACCM, Dept of Medicine University of Pittsburgh, Pittsburgh, USA	Research Assistant Professor
2006 - 2010	PACCM, Dept of Medicine University of Pittsburgh, Pittsburgh, USA	Research Associate

MEMBERSHIPS in PROFESSIONAL and SCIENTIFIC SOCIETIES

American Thoracic Society
Society of Toxicology, USA
American Heart Association

HONORS, AWARDS, and SCHOLARSHIPS

2006 Governmental Recognized Scientific Meritorious Award, Shanghai, China
2008 Strategic Training in Allergy Research (ST*AR) Program Award, AAAAI, USA

PROFESSIONAL ACTIVITIES

1. Research

a. Grants and Contracts Received

Principal Investigator

Years Inclusive	Grant and/or Contract Number and Title	Source	Annual Direct Costs	% Effort
2008-2010	No. 0825556D Regulation of gene expression by 15LO1 pathway in human airway epithelial cells	American Heart Association	\$88,000	50%
2012-2014	RG-231468-N PEBP1 Acts as a FLAP-like Protein to Enhance 15-HETE Generation in Airway Epithelial Cells	American Lung Association	\$80,000	50%

Co-Investigator on Grants

Years Inclusive	Grant and/or Contract Number and Title	Source	Annual Direct Costs	% Effort
2010-2015	R01: AI-40600-15 Amplification of IL-4Ra signaling pathways in human airways through 15LO1	NIH	\$258,714	50%
2020-2024	R01: AI-145406: Protein-Oxidized Phospholipid Interactions Determine Epithelial Cell Fate and Asthma Control	NIH	\$341,536	50%

2. Teaching

a. Courses

- 2013-14 The Fundamentals of Bench Research Course, *Role: Primary lecturer*
“Cell culture techniques” section, for clinical fellows in School of Medicine at Pitt.
- 2011-2017 The Fundamentals of Bench Research Lab session, *Role: Primary instructor*
“Cell culture techniques” section, for clinical fellows in School of Medicine at Pitt.

b. Supervision of Post-Doctoral Students, Residents, and Fellows (*total of 14 trainees, the name of trainees not listed*).

PUBLICATIONS

1. Refereed Articles

1. **Zhao J**, Haider H. Dar, Yanhan Deng, Claudette M. St Croix, Zhipeng Li, Yoshinori Minami, Indira H. Shrivastava, Yulia Y. Tyurina, Emily Etling, Joel C. Rosenbaum, Tadao Nagasaki, John B. Trudeau, Simon C. Watkins, Ivet Bahar, Hülya Bayır, Andy P. VanDemark, Valerian E. Kagan and Sally E Wenzel. PEBP1 acts as a rheostat between prosurvival autophagy and ferroptotic death in asthmatic epithelial cells. *PNAS* 2020 June.
2. D Sudipta Das, Claudette St. Croix, Misty Good, Jie Chen, **J Zhao**, Sanmei Hu, Mark Ross, Michael M. Myerburg, Joseph M. Pilewski, John Williams, Sally E. Wenzel, Jay K. Kolls, Anuradha Ray, Prabir Ray. Interleukin-22 Inhibits Respiratory Syncytial Virus Production By Blocking Virus Mediated Subversion of Cellular Autophagy. *ISCIENCE*. 2020 June 16.
3. Li Z, Zeng M, Deng Y, **Zhao J**, Zhou X, Trudeau JB, Goldschmidt E, Moore JA, Chu H, Zhang W, Yin S, Liu Z, Di YP, Lee SE, Wenzel SE. 15-Lipoxygenase 1 in nasal polyps promotes CCL26/eotaxin 3 expression through extracellular signal-regulated kinase activation. *JACI*, 2019 Nov;144(5):1228-1241.
4. Anthonymuthu TS, Kenny EM, Shrivastava I, Tyurina YY, Hier ZE, Ting HC, Dar HH, Tyurin VA, Nesterova A, Amoscato AA, Mikulska-Ruminska K, Rosenbaum JC, Mao G, **Zhao J**, Conrad M4, Kellum JA, Wenzel SE, VanDemark AP, Bahar I, Kagan VE, Bayır H. Empowerment of 15-Lipoxygenase Catalytic Competence in Selective Oxidation of Membrane ETE-PE to Ferroptotic Death Signals, HpETE-PE. *J Am Chem Soc*. 2018 Dec 26;140(51):17835-17839.
5. Wenzel SE, Tyurina YY, **Zhao J***, St. Croix CM, Mao G, Tyurin VA, Anthonymuthu TS, Kapralov AA, Mikulska-Ruminska K, Shrivastava IH, Kenny E, Yang Q, Dar HH, Qu F, Amoscato AA, Sparvero LJ, Emler DR, Rosenbaum JC, Watkins SC, VanDemark AP, Kellum JA, Minami Y, Bahar I, Bayır H, Kagan VE. PEBP1 Wardens Ferroptosis by Enabling Lipoxygenase Generation of Lipid Death Signals. *Cell*. 2017,19;171(3):628-641. PMID: 29053969. (***Co-author with substantial contribution. Covered by local and University news report**).
6. **Zhao J***, Minami Y, Etling E, Coleman JM, Lauder SN, Tyrrell V, Aldrovandi M, O'Donnell V, Claesson HE, Kagan V, Wenzel S. Preferential Generation of 15-HETE-PE Induced by IL-13 Regulates Goblet Cell Differentiation in Human Airway Epithelial Cells. *Am J Respir Cell Mol Biol*. 2017 Dec;57(6):692-701. PMID: 28723225. (***Corresponding Author**).
7. Albano GD, **Zhao J***, Etling EB, Park SY, Hu H, Trudeau JB, Profita M, Wenzel SE. IL-13 desensitizes β 2-adrenergic receptors in human airway epithelial cells through a 15-lipoxygenase/G protein receptor kinase 2 mechanism. *J Allergy Clin Immunol*. 2015 May;135(5):1144-53. PMID: 25819984. (***Co-first author, and Corresponding Author. Featured as Editor's Choice**).

8. **Zhao J***, Wenzel S. Interactions of RKIP with inflammatory signaling pathways. *Crit Rev Oncog.* 2014;19(6):497-504. Review. PMID: 25597359. (***Corresponding Author**).
9. Voraphani N, Gladwin MT, Contreras AU, Kaminski N, Tedrow JR, Milosevic J, Bleecker ER, Meyers DA, Ray A, Ray P, Erzurum SC, Busse WW, **Zhao J**, Trudeau JB, Wenzel SE. An airway epithelial iNOS-DUOX2-thyroid peroxidase metabolome drives Th1/Th2 nitrate stress in human severe asthma. *Mucosal Immunol.* 2014 Sep;7(5):1175-85. PMID: 24518246.
10. Di YP, **Zhao J***, Harper R. Cigarette smoke induces MUC5AC protein expression through the activation of Sp1. *J Biol Chem.* 2012 Aug 10;287(33):27948-58. PMID: 22700966. (***Co-author with substantial contribution**).
11. **Zhao J** and Wenzel SE. 15LO1 pathway activation-Are receptors important? *PNAS*, 2012 Jan 3; 109(1):E2. PMID: PMC3252936
12. **Zhao J**, O'Donnell VB, Balzar S, St Croix CM, Trudeau JB, Wenzel SE. 15-Lipoxygenase 1 interacts with phosphatidylethanolamine-binding protein to regulate MAPK signaling in human airway epithelial cells. *PNAS.* 2011 Aug 23;108(34):14246-51. PMID: 21831839. (**Covered by local and University news report**).
13. **Zhao J***, Maskrey B, Balzar S, Chibana K, Mustovich A, Hu H, Trudeau JB, O'Donnell V, Wenzel SE. Interleukin-13-induced MUC5AC is regulated by 15-lipoxygenase 1 pathway in human bronchial epithelial cells. *Am J Respir Crit Care Med.* 2009 May 1;179(9):782-90. PMID: 19218191. (***Corresponding Author**).
14. Chibana K, Trudeau JB, Mustovich AT, Hu H, **Zhao J**, Balzar S, Chu HW, Wenzel SE. IL-13 induced increases in nitrite levels are primarily driven by increases in inducible nitric oxide synthase as compared with effects on arginases in human primary bronchial epithelial cells. *Clin Exp Allergy.* 2008 Jun;38(6):936-46. PMID: 18384429.
15. **Zhao J**, Harper R, Barchowsky A, Di YP. Identification of multiple MAPK-mediated transcription factors regulated by tobacco smoke in airway epithelial cells. *Am J Physiol Lung Cell Mol Physiol.* 2007 Aug;293(2):L480-90. PubMed PMID: 17496060
16. Zhang ZH, **Zhao J**, Jiang SH, Zhu HG. Distribution of microcystin-LR and anatoxin-A and their influence factors in Dianshan Lake during summer and autumn. *J. Hygiene Res*, 2003, 32 (4): 316-319. PMID: 14535091
17. **Zhao J**, Zhu HG. Effects of Microcystins on cell cycle and expression of c-fos and c-jun. *J. Preventive Medicine of China*, 2003, 37(1): 23~25. PMID: 12760790.
18. **Zhao J**, Jiang SH, Zhu HG. Promoting activity of Microcystins on hepatocarcinogenesis in Rats induced by organic extraction of tap-water. *China Environmental Science*, 2003,23(1): 16-20.
19. **Zhao J**, Jiang SH, Zhu HG. Promoting activity of Microcystin on hepatocarcinogenesis in rats. *China Public Health*, 2003, 19: 694~7.
20. **Zhao J**, Zhu HG. Study on carcinogenicity of Microcystins. *Environmental Health*, 2002, 19(6): 464-467.
21. **Zhao J**, Zhou SQ. Experimental study on potential carcinogenicity of Cooking Fume Condensate. *J. Hygiene Res*, 2002, 31(1): 21~22.
22. **Zhao J**, Zhou SQ. Malignant transformation of Human Embryo Lung Cell induced by cooking fumes condensates. *China Public Health*, 2000, 16(5): 397~399.

2. Published Abstracts

1. **Zhao J**, Y.P.Di, et al. Transcriptional regulation of cigarette smoke exposure in airway epithelium. *Am. J. Respir. Crit.Care Med*, 2004 Apr; 169(7):A643.
2. **Zhao J**, Y.P.Di, et al. Tobacco smoke-induced mucus hypersecretion in human airway epithelium is regulated through MAPK signaling pathway. *Proceed. Am. Thoracic Society*. 2005 Apr, Vol 2:A558.

3. **Zhao J**, Y.P.Di, et al. Identification of MAPK-mediated Transcriptional Factors induced by smoke. *Proceed. Am. Thoracic Society. 2006 Apr, Vol 3:A502.*
4. **Zhao J**, Chibana K, Trudeau J, Balzar S and Wenzel SE. Mucus expression induced by IL-13 is 15-lipoxygenase pathway-dependent in human bronchial epithelial cells. *Am. J. Respir. Crit.Care Med, 2007 Apr; 175:A174.*
5. **Zhao J**, Maskrey B, O'Donnell V, Chibana K, Trudeau J, Balzar S, Wenzel SE. IL-13 induced MUC5AC is regulated by 15-Lipoxygenase (LO) 1 Pathway in Human Bronchial Epithelial Cells. *Annual Meeting of the American Academy of Allergy, Asthma & Immunology. Philadelphia, Pennsylvania. March 2008.*
6. **Zhao J**, Trudeau J, Wenzel SE. RKIP mediates MAPK/ERK Signaling Pathway induced by IL-13 in Human Bronchial Epithelial Cells. *2009 International Conference for American Thoracic Society. San Diego, California. May 2009.*
7. **Zhao J**, Trudeau J, Wenzel SE. Identification of multiple transcription factors induced by IL-13 in human airway epithelial cell using Protein/DNA Array. *American Thoracic Society International Conference. New Orleans, Louisiana. May 14-19, 2010.*
8. **Zhao J**, Trudeau J, Wenzel SE. 15-Lipoxygenase 1 interacts with PEBP1 to regulate MEK/ERK pathway in asthmatic airway epithelial cells. *American Thoracic Society International Conference. Denver, Colorado. May 2011.*
9. **Zhao J**, Trudeau J, Wenzel SE. 15-Lipoxygenase 1 regulates LC3 expression/activation in asthmatic airway epithelial cells. *American Thoracic Society International Conference. San Francisco, California. May 2012.*
10. **Zhao J**, Albano G, Etling E, Wenzel SE. 15LO1 regulate β 2AR desensitization in human airway epithelial cells. *American Thoracic Society International Conference. Philadelphia, Pennsylvania. May 2013.*
11. Etling E, Tyrrell, V, Yecies EB, Trudeau, J, Claesson HE, O'Donnell VB, **Zhao J**, Wenzel SE. Lipoxygenase metabolite profile in human airway Epithelial cells (HAECs). *ATS 2015. Denver, Colorado, May 2015.*
12. Yecies EB, **Zhao J**, Wenzel SE, et al. 15-Lipoxygenase 1 regulates Forkhead Box Protein A3 Expression and Goblet Cell Differentiation in Human Bronchial Epithelial Cells (BAECs). *ATS 2015. Denver, Colorado, May 2015.*
13. Y. Minami, Etling E, **Zhao J**, Wenzel SE, et al. The effect of the 15-lipoxygenase 1 (15LO1) inhibitor BLX2477 on IL-13-induced periostin mRNA expression in Human Airway Epithelial Cells. *ATS 2016, SF, CA, May 2016*
14. Etling E, **Zhao J**, Wenzel SE, et al. Phosphatidylethanolamine-binding Protein 1 Modulates 15-Lipoxygenase 1 Pathway in Human Airway Epithelial Cells. *ATS 2016, SF, CA, May 2016*
15. Y. Minami, **Zhao J**, Wenzel SE, et al. 15-lipoxygenase 1 pathway regulates autophagy in Human Airway Epithelial Cells (HAECs). *ATS 2017, Washington, DC. May 2017.*
16. **Zhao J**, Wenzel SE, et al. Preferential generation of 15-hydroxyeicosatetraenoic acid (HETE)-phosphatidylethanolamine (PE) in response to IL-13 regulates goblet cell differentiation in human airway epithelial cells. *2017 Keystone Symposia Conference. Tahoe City, California. Feb 2017.*
17. Deng Y. **Zhao J**, Wenzel SE, et al. Autophagy Protects 15LO1-mediated Ferroptotic Cell Death in Human Airway Epithelial Cells (HAECs). *SfRBM Redox Regional & Oberley Symposium. Omaha, Nebraska. Jun 2018.*
18. T. Nagasaki, **J. Zhao**, D. Yanhan, JB. Trudeau, N. Bonfiglio, S.E. Wenzel. Regulation of intracellular glutathione redox state in asthma. *ATS 2019, Dallas, TX. May 2019.*
19. Deng Y. **Zhao J**, Wenzel SE, et al. Autophagy limits 15LO1-mediated ferroptotic cell death and associated mitochondrial DNA release in human airway epithelial cells (HAECs). *ATS 2019, Dallas, TX. May 2019.*

20. Shuangjia Xue, **Zhao J**, Wenzel SE, et al. A ferroptosis-related gene signature predicts exacerbation-prone asthma. *ATS 2019, Dallas, TX. May 2019.*
21. **Zhao J** and Wenzel SE. Epithelial Type-2 processes drive mitochondrial loss and cell differentiation. *The 2019 NHLBI mitochondria Biology Symposium. Bethesda, MD. Sept 2019.*

3. Conference Talk and Presentation

1. IL-13 induced MUC5AC is regulated by 15-Lipoxygenase (LO) 1 Pathway in Human Bronchial Epithelial Cells. *Annual Meeting of the American Academy of Allergy, Asthma and Immunology, Philadelphia, PA. March 14-18, 2008*
2. 15-Lipoxygenase 1 pathway and autophagy in asthmatic airway. *Keystone: Autophagy, Inflammation and Immunity. QC, Canada. February 27, 2013*
3. 15-Lipoxygenase-1 activation in asthma. *World Enzymes & Biocatalysis Congress, Dalian, China. April 23, 2014*

SERVICE

1. Service to Field of Scholarship: Manuscript and Document/Publication Review

American Journal of Respiratory and Critical Care Medicine
 American Journal of Respiratory Cell and Molecular Biology
 American Journal of Respiratory Cell and Molecular Biology
 American Journal of Physiology - Lung Cellular and Molecular Physiology
 Bentham Science Publishers
 European Respiratory Journal
 Chest
 Journal of Allergy and Clinical Immunology
 British Journal of Pharmacology
 PLOS ONE
 Journal of Applied Toxicology
 Environmental Pollution
 American Journal of Respiratory Cell and Molecular Biology
 Toxicology Research
 Ecotoxicology and Environmental
 Life Science
 Chemistry and Physics of Lipids