

Curriculum Vitae
Ivana Verona Yang, Ph.D.

Personal History

Born: September 17, 1973
Present Position: Associate Professor, Department of Medicine and Integrated Center for Genes, Environment, and Health, University of Colorado Denver and National Jewish Health
Address: University of Colorado Denver
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Citizenship: United States
Marital Status: Married

Educational History

1992-1996 **College of William and Mary, Williamsburg, VA**
B.S. Chemistry
1996-2000 **University of North Carolina at Chapel Hill, Chapel Hill, NC**
Ph.D. Chemistry
2001-2003 **The Institute for Genomic Research, Rockville, MD**
Postdoctoral Fellow, Functional Genomics

Additional Courses:

2008 **SOLiD Next-Generation Sequencing**, Applied Biosystems, Foster City CA
2005 **Principles of Quantitative Genetics, QTL Mapping I, and QTL Mapping II**, Summer Institute in Statistical Genetics, North Carolina State University
2004 **Classical Readings in Statistical Human Genetics**, Center for Human Genetics, Duke University Medical Center
2002 **Genome Sequence Analysis**, Jackson Laboratories, Bar Harbor ME
2001 **PERL Programming**, Sun Educational Services, Washington DC
1998 **Inorganic Biochemistry Summer Workshop**, Center for Metalloenzyme Studies, University of Georgia

Professional Position

2003-2005 **Assistant Research Professor**, Department of Medicine, Duke University Medical Center, Durham, NC
2005-2008 **Staff Scientist**, Laboratory of Environmental Lung Disease, National Institute of Environmental Health Sciences (NIEHS) and National Heart Lung and Blood Institute (NHLBI), Research Triangle Park, NC
2008-2011 **Assistant Professor**, Center for Genes, Environment, and Health and

	Department of Medicine, National Jewish Health, Denver, CO Deputy Director , Center for Genes, Environment, and Health, National Jewish Health, Denver, CO
2009-2011	Assistant Professor , Department of Medicine, University of Colorado Denver
2011-present	Associate Professor , Department of Medicine and Integrated Center for Genes, Environment, and Health, University of Colorado Denver and National Jewish Health

Honors and Awards

2003	EU-US Workshop on Molecular Signatures of DNA Damage Induced Stress Response Young Scientist Travel Award
2002	Aspen Cancer Conference Young Investigator
1996	Phi Beta Kappa
1996	American Institute of Chemists Undergraduate Award
1996	Highest Honors in Chemistry/Magna Cum Laude, College of William and Mary
1996	American Chemical Society Certification
1995	Llanso-Sherman Fellowship for Research in Natural Sciences
1995	Mortar Board

Professional Affiliations

2010-present	American Thoracic Society
2008-present	American Society for Human Genetics
1995-2002	American Chemical Society

Professional Service and Committees

2011	ZRG1 BST-F 30 Shared Instrument Study Section , NIH
2010	Bioinformatics Faculty Search Committee , Marshall University WV
2010	Program Committee , The 18 th International Conference on Intelligent Systems for Molecular Biology (ISMB)
2009-Present	Faculty Development Research Award Committee , Denver Children's Environmental Health Center (CEHC)
2009-Present	External Advisory Committee , West Virginia-IDEA Networks of Biomedical Research Excellence (WV-INBRE)
2009-Present	Nucleic Acids Isolation Committee , Lung Genomics Research Consortium (LGRC)
2007-2008	Division of Intramural Research (DIR) Committee on Promotions III , National Institute of Environmental Health Sciences (NIEHS)

Patents

Method for Electrochemical Detection of Multiple Target Compounds; HH Thorp, **IV Yang**, DH Stewart, JW Groelke; US Patent 7202028, Awarded April 10, 2007; WO 03/089895; Australia, Serial Number 2002367807; Europe, EP1583842.

Review and Referee Activities

Reviewer for the Following Scientific Journals:

American Journal of Physiology - Lung Cellular and Molecular Physiology
American Journal of Respiratory and Critical Care Medicine
American Journal of Respiratory Cell and Molecular Biology
Bioinformatics
Critical Care Medicine
Epigenomics
FEBS Letters
Genes and Immunity
Genomics
Journal of Allergy and Clinical Immunology
Nucleic Acids Research
PLOS One

Teaching Activities

Teaching Assistant:

1995-1996	General Chemistry Laboratory, College of William and Mary
1996-1997	Chemistry 11L and 21L Courses, UNC—Chapel Hill
2001	TIGR Microarray Workshop, ABRF Meeting, San Diego CA

Lectures in Courses/Teaching Seminars:

2001	Microarray expression analysis. Bioinformatics; Principles and Applications1. FAES Graduate School at the NIH.
2009	Identification of novel innate immune genes using gene expression profiling and genetic mapping in mice. NHLBI Omics Workshop, UC Denver and National Jewish Health.
2010	Technologies for epigenomic profiling. NHLBI Omics Workshop, UC Denver and National Jewish Health.
2010	Technologies for Genetics and Genomics Research at National Jewish Health, Lung Cell Biology Seminar, National Jewish Health
2010	Sequencing the Lung: Application of Next-generation Sequencing to Pulmonary Research, Basic Science Section Seminar, National Jewish Health
2011	The role of epigenetics in the development of asthma. IMMU 7603: The immunologic basis of human disease, UC Denver and National Jewish Health.

Lectures to Lay Audiences:

2009	Genomic expression in personalized medicine. National Jewish Health Council of National Trustees and Board of Directors Annual Meeting, Denver CO
2009	The role of epigenetics in the development of asthma. Boulder Torch Club, Boulder CO
2010	Environmental Determinants of Airway Disease in Children. Children's Environmental Health Center (CEHC) Community Advisory Board (CAB) Meeting, Denver CO

Undergraduate Student Mentor:

1998-2000	Melissa Singer, UNC - Chapel Hill
2002-2003	Alana Genderson, The Institute for Genomic Research
2004-2005	Sarah Weinke, Duke University Medical Center
2009-2010	Jenni Adams, National Jewish Health (summer)
2010	Megan Bonney, National Jewish Health (summer)
2010	Rachel Burton, National Jewish Health (summer)

Postdoctoral Fellow Mentor:

2005-2006	Terri Eliss PhD, NIEHS
2009-2010	Leah Luna PhD, National Jewish Health
2009-Present	Judy Oakes PhD, National Jewish Health and University of Colorado
2011-Present	Anne Agler PhD, University of Colorado
2011-Present	Andres Henao Martinez MD, University of Colorado

Technician Supervisor:

2005-2008	Holly Rutledge, NIEHS
2006-2008	Jun Yang, NIEHS
2008-2011	Laura Warg, National Jewish Health
2008-Present	Elizabeth Davidson, National Jewish Health and University of Colorado
2008-Present	Elissa Murphy, National Jewish Health and University of Colorado
2009-Present	Corinne Hennessy, National Jewish Health and University of Colorado
2010-2011	Megan Bonney, National Jewish Health
2011-Present	Rachel Burton, University of Colorado
2011-Present	Amanda Holland-Neidermyer, University of Colorado

Senior Scientist Supervisor:

2010	Nicholas Sisneros, National Jewish Health
2010-2011	Eveline Farias-Hesson, National Jewish Health
2009-2011	Daniel LaFlamme, National Jewish Health

Bioinformatics Analyst Supervisor:

2011-Present	David McKean, University of Colorado
2011-Present	Brent Pedersen, National Jewish Health and University of Colorado
2010-2011	Joseph Brown, National Jewish Health
2009-2010	Julia Turner, National Jewish Health

Research Committee Member:

2011-Present	Li Li PhD, University of Colorado
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Research Grants, Contracts, and Special Grants

	<u>Title</u>	<u>Period</u>	<u>Total Direct Funding</u>
Pending:			
NIH-NIDDK: R01 DK068001	Exploring Perinatal Outcomes in Children (EPOCH II) Principal Investigator: Dabelea Co-investigator: Yang	10/01/11-09/30/16	\$2,500,000
NIH-NHLBI/NHGRI: 1R01HL113368-01	Beyond Linkage and GWAS in Pulmonary Fibrosis Principal Investigator: Schwartz Co-investigator: Yang	04/01/12-03/31/17	\$3,482,166
NIH-NIEHS: R21-ES021305	The Role of Maternal Dietary Folate in DNA	04/01/12-03/31/15	\$300,000

Methylation and Asthma Development
Principal Investigator: Yang

NIH-NHLBI: P01-HL112725 Interstitial Lung Disease: Genome and Environment Principal Investigator: Maier Molecular and Analytical Core Leader: Yang	04/01/12-03/31/16	\$7,575,000
NIH-NIEHS R01 Environmental Chemicals and Childhood Obesity (ECCHO) PIs: Hamman, Adgate, Dabelea Co-investigator: Yang	07/01/12-06/30/17	\$2,500,000
NIH-NHLBI R01 Genetic Risk for Granulomatous Interstitial Lung Disease Principal Investigator: Fingerlin Co-investigator: Yang	07/01/12-06/30/17	\$2,500,000
Active:		
NIH-NHLBI: R01-HL095393 Genomic Signatures for Idiopathic Interstitial Pneumonia Principal Investigator: Schwartz Co-investigator: Yang	09/24/08—07/31/12	\$2,000,000
NIH-NHLBI: R01-HL101251 Asthma: An Epidemic Caused by Epigenetics? Multi-Principal Investigator: Yang	07/01/09—06/30/14	\$3,331,177
NIH-NIEHS: P01-ES18181 Determinants of Environmental Airway Disease Principal Investigator: Schwartz Project 3 Co-Leader: Yang (Environmental Determinants of Host Defense)	09/01/09—08/31/14	\$4,997,747 (Project 3: \$1,227,506)
NIH-NHLBI: RC1-HL099571 Peripheral Blood Biomarkers for Idiopathic Interstitial Pneumonia Multi-Principal Investigator: Yang	09/30/09—09/29/12 (NCE)	\$916,670
NIH-NHLBI: RC2-HL101715 Lung Genomics Research Consortium Multi-Principal Investigator: Schwartz Co-investigator: Yang	09/30/09—09/29/12 (NCE)	\$11,401,677
NIH-NIAID: N01-AI90052 Inner-City Asthma Consortium The Role of Epigenetics in Inner City Asthma Principal Investigator: Busse Project Leader: Schwartz Co-investigator: Yang	12/01/09—11/30/14	\$2,465,777

NIH-NCRR: P20-RR016477 WV-INBRE II Principal Investigator: Rankin External Advisory Committee Member: Yang	05/01/09—04/30/14	\$10,000,000
NIH-NCRR: S10-RR031832 Supercomputer Linux Cluster for Genomics and Proteomics Principal Investigator: Schwartz Major User: Yang	06/15/11-06/14/12	\$598,964
NIH-NHLBI: R21-HL106112 Air/Liquid Interface Cultures for Alveolar Type II Cell Differentiation Principal Investigator: Mason Consultant: Yang	07/01/11-06/30/13	\$275,000
NIH-NIEHS K01-ES20857 Jak/STAT and MAPK Pathways in Beryllium Disease PI: Li Li Research Committee Member: Yang	09/19/11-09/18/16	

Completed:

NIH-NCRR: P20-RR020180 Transcription Factors in Cancer Principal Investigator: Niles Genetics Core Director: Primerano Consultant: Yang	09/23/04—07/31/09	
NIH-NHLBI: P50-HL084917 Host Defense Mechanisms in Chronic Lung Disease Principal Investigator: Wright Project 3 Director: Palmer Consultant: Yang	09/16/06—07/31/11 (involved in Y1)	
NIH-NIEHS: Z01-ES101946 The Genetic Determinants of Innate Immunity and Host Defense Principal Investigator: Schwartz Staff Scientist: Yang	05/23/05—06/07/08	

Bibliography

Original Manuscripts:

1. **Verona I**, Gutheil JP, Pike RD, Carpetner GB. Regioselectivity in the nucleophilic functionalization of dibenzofuran, dibenzothiophene, and xanthene complexes of $\text{Mn}(\text{CO})_3^+$. *J. Organometallic Chem.* 524, 71-80 (1996).
2. **Yang IV**, Thorp HH. $[\text{Ru}(\text{bpy})_3]^{2+}$ -mediated guanine oxidation in DNA polymers and in oligonucleotides containing trinucleotide repeat sequences. *Inorg. Chem.* 39, 4969-4976 (2000).

3. Weatherly SC, **Yang IV**, Thorp HH. Proton-coupled electron transfer in duplex DNA: driving force dependence and isotope effects on electrocatalytic oxidation of guanine. *J. Am. Chem. Soc.* 123, 1236-1237(2001).
4. **Yang IV**, Thorp HH. Oxidation of 7-deazaguanine: mismatch-dependent electrochemistry and selective strand scission. *Inorg. Chem.* 40, 1690-1697 (2001).
5. Baik M-H, Silverman JS, **Yang IV**, Szalai VA, Ropp PA, Yang W, Thorp HH. Using density functional theory to develop a complete set of oxidizable nucleobases. *J. Phys. Chem. B* 105, 6437-6444 (2001).
6. **Yang IV**, Thorp, HH. Modification of indium tin oxide electrodes with repeat polynucleotides: electrochemical detection of trinucleotide repeat expansion. *Anal. Chem.* 73, 5316-5322 (2001).
7. **Yang IV**, Thorp HH. Toward electrochemical resolution of two genes on one electrode: using 7-deaza analogs of guanine and adenine to prepare PCR products with differential redox activity. *Anal. Chem.* 74, 347-354 (2002).
8. **Yang IV**, Chen E, Hasseman JP, Liang W, Frank BC, Wang S, Sharov V, Saeed AI, White J, Li J, Lee NH, Yeatman TJ, Quackenbush J. Within the fold: assessing differential expression measures and reproducibility of microarray assays. *Genome Biol.* 3, research0062 (2002).
9. The FANTOM Consortium and the RIKEN Genome Exploration Research Group Phase I and II Team. Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs. *Nature* 420, 563-573 (2002).
10. Weatherly SC, **Yang IV**, Armistead PM, Thorp HH. Proton-coupled electron transfer in guanine oxidation: effects of isotope, solvent, and chemical modification. *J. Phys. Chem. B.* 107, 372 (2003).
11. Chen T, **Yang I**, Irby R, Shain KH, Wang HG, Quackenbush J, Coppola, D, Yeatman TJ. Regulation of caspase expression and apoptosis by adenomatous polyposis coli. *Cancer Res.* 63, 4368-4374 (2003).
12. Gore MR, Szalai VA, Ropp PA, **Yang IV**, Silverman JS, Thorp HH. Detection of attomole quantities of DNA targets on gold microelectrodes by electrocatalytic nucleobase oxidation. *Anal. Chem.* 75, 6586-92 (2003).
13. Bloom G*, **Yang IV***, Boulware D, Kwong KY, Coppola D, Eschrich S, Quackenbush J, Yeatman TJ. Multi-platform, multi-site, microarray-based human tumor classification. *Am. J. Pathol.* 164, 9-16 (2004) (*authors contributed equally).
14. Sharov V, Kwong KY, Frank BC, Chen E, Hasseman JP, Gaspard, R, Yu Y, **Yang I**, Quackenbush J. The limits of log-ratios. *BMC Biotechnol.* 4, 3 (2004).
15. Bloomston M, Durkin A, **Yang I**, Rojiani M, Rosemurgy AS, Enkmann S, Yeatman TJ, Zervos EE. Identification of molecular markers specific for pancreatic neuroendocrine tumors by genetic profiling of core biopsies. *Ann. Surg. Oncol.* 11, 413-9 (2004).
16. Qin L-X, Kerr KF, and Contributing Members of the Toxicogenomics Research Consortium. Empirical evaluation of data transformations and ranking statistics for microarray analysis. *Nucleic Acids Res.* 32, 5471-79 (2004).
17. Eschrich S, **Yang I**, Bloom G, Kwong KY, Boulware D, Cantor A, Coppola D, Kruhøffer M, Aaltonen L, Orntoft TF, Quackenbush J, Yeatman TJ. Molecular staging for survival prediction of colorectal cancer patients. *J. Clin. Oncol.* 23, 3526-35 (2005).

18. Kwong KY, Bloom GC, **Yang I**, Boulware D, Coppola D, Hasseman J, Chen E, McGrath A, Makusky AJ, Taylor J, Steiner S, Zhou J, Yeatman TJ, Quackenbush J. Synchronous global assessment of gene and protein expression in colorectal cancer progression. *Genomics* 86, 142-58 (2005).
19. Burch, LH, **Yang, IV**, Whitehead GS, Berman KG, Chao FG, Schwartz DA. Transcriptional response to endotoxin reveals role for interferon gamma in lung neutrophil recruitment. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 291, L677-82 (2006).
20. **Yang IV**, Burch LH, Steele MP, Savov JD, Hollingsworth JW, Berman KG, Speer MC, Brown KK, Schwarz MI, Schwartz DA. Gene expression profiling of familial and sporadic interstitial pneumonia. *Am. J. Resp. Crit. Care Med.* 175, 45-54 (2007) (with accompanying editorial).
21. Brass DM*, **Yang IV***, Kennedy MP, Whitehead GS, Rutledge H, Burch LH, Schwartz DA. LPS-induced airway remodeling is a fibroproliferative process. *Immunogenetics* 60, 353-69 (2008). (*authors contributed equally).
22. Huang YC, Li Z, Carter JD, Soukup JM, Schwartz DA, **Yang IV**. Fine ambient particles induce oxidative stress and metal binding genes in human alveolar macrophages. *Am J Respir Cell Mol Biol.* 41: 544-52 (2009).
23. **Yang IV**, Wade CM, Kang HM, Alper S, Lackford B, Rutledge H, Eskin E, Daly MJ, Schwartz DA. Identification of novel genes that mediate innate immunity using inbred mice. *Genetics.* 183,1535-44 (2009).
24. **Yang IV**, Alper S, Lackford B, Rutledge H, Warg LA, Burch LH, Schwartz DA. Novel regulators of the systemic response to lipopolysaccharide (LPS). *Am J Respir Cell Mol Biol.* 45: 393-402 (2011).
25. Lei J, Liang-guo X, **Yang IV**, Davidson EJ, Schwartz DA, Wurfel MM, Cambier JC. Identification and characterization of a loss-of-function human MPYS variant. *Genes and Immunity.*12: 263-9 (2011).
26. Seibold MA, Wise AL, Speer MC, Steele MP, Brown KK, Loyd JE, Fingerlin TE, Zhang W, Gudmundsson G, Groshong SD, Evans CM, Garantziotis S, Adler KB, Dickey BF, du Bois RM, **Yang IV**, Herron A, Kervitsky D, Talbert JL, Markin C., Park J, Crews AL, Slifer SH, Auerbach S, Roy MG, Lin J, Hennessy CE, Schwarz MI, and Schwartz DA. A common polymorphism in the putative promoter of MUC5B is associated with familial interstitial pneumonia (FIP) and idiopathic pulmonary fibrosis (IPF). *N Engl J Med.* 364:1503-1512 (2011).
27. Aylor DL, Valdar W, Foulds-Mathes W, Buus RJ, Verdugo RA, Baric RS, Ferris MT, Frelinger JA, Heise M, Frieman MB, Gralinski LE, Bell TA, Didion JD, Hua K, Nehrenberg DL, Powell CL, Steigerwalt J, Xie Y, Kelada SNP, Collins F, **Yang IV**, Schwartz DA, Branstetter LA, Chesler EJ, Miller DR, Spence J, Liu EY., McMillan L, Sarkar A, Wang J, Wang W, Zhang Q, Broman KW, Korstanje R, Durrant C, Mott R, Iraqi FA, Pomp D, Threadgill D, Pardo-Manuel de Villena F, Churchill GA. Genetic Analysis of Complex Traits in the Emerging Collaborative Cross. *Genome Res.* 21:1213-22 (2011).
28. Rutledge HR, Jiang W, Yang J, Warg LA, Schwartz DA, Pisetsky, DS, **Yang IV**. Gene expression profiles of RAW264.7 macrophages stimulated with preparations of lipopolysaccharide (LPS) differing in isolation and purity. *Innate Immunity.* In press.
29. **Yang IV**, Jiang W, Rutledge HR, Lackford B, Alper S, Schwartz DA, Pisetsky DS. Molecular Pathways and Transcriptional Networks Induced in RAW264.7 Macrophage Cells by Stimulation with TLR Ligands. *Molecular Immunology.* In press.

30. **Yang IV**, Rutledge H, Yang J, Warg LA, Sevilla S, Schwartz DA. A Locus on Chromosome 9 is Associated with Differential Response of 129/SvIm and FVB/NJ Strains of Mice to Systemic LPS. *Mammalian Genome*. In press.
31. Zemans R, Briones N, Campbell M, McClendon J, Young S, Suzuki T, **Yang I**, De Langhe S, Henson P, Reynolds S, Colgan S, Downey, GP. Neutrophil Transmigration Triggers Repair of Human and Murine Lung Epithelium via Beta-catenin Signaling in Lung Injury. *Proc Natl Acad Sci USA*. In press.

Manuscripts Under Review:

1. Rajapakse NC, **Yang IV**, Fowler VG, Mav D, Schwartz DA, Blackshear PJ. Association of a ZFP36 polymorphism with decreased risk of gram positive sepsis. Submitted.
2. Gao Z, Dosman JA, Rennie D, Schwartz D, **Yang IV**, Beach J, McDermid H, Senthilselvan A. Effects of Toll-Like Receptor 4 (TLR4) polymorphisms and employment status on decline lung function and respiratory symptoms among workers in swine facilities. Submitted.
3. De Arras L, **Yang IV**, Lackford B, Riches DWH, Prekeris R, Freedman JH, Schwartz DA, Alper S. Temporally controlled inhibition of innate immunity signaling by the Tbc1d23 RAB-GAP. *Proc Natl Acad Sci USA*. Submitted.
4. **Yang IV**, Tomfohr J, Singh J, Foss CM, Marshall HE, Que LG, Florence S, McElvania-Tekippe E, Sundy JS, Schwartz DA. In vivo Gene Expression is Influenced by Specific Exposures and Disease State in Allergic Asthma. Submitted.
5. Luna LG, **Yang IV**, Cotter J, Talbert J, Leach S, Kidd R, Turner J, Kummer N, Kervitsky D, Brown KK, Boon K, Schwarz MI, Schwartz DA, Steele MP. The Peripheral Blood Transcriptome Identifies the Presence of Disease and Differentiates the Extent of Disease by DLCO for Idiopathic Pulmonary Fibrosis. Submitted.

Manuscripts in Preparation:

1. **Yang IV**, Seibold MA, Fingerlin TE, Schwartz DA. The evolution of sequencing approaches for human genetic analysis. In preparation.
2. Warg LA, Oakes J, Burton R, Rutledge HR, Groshong S, Schwartz DA, **Yang IV**. The Role of the E2F1 Transcription Factor in the Innate Immune Response in Mice. In preparation.
3. **Yang IV**, Coldren CD, Leach SM, Fingerlin TE, Murphy E, Lin J, Cosgrove GP, Lynch D, Groshong S, Cool C, Brown KK, Schwarz MI, Schwartz DA. Molecular Phenotyping of the Idiopathic Interstitial Pneumonias Identifies Two Subtypes of Idiopathic Pulmonary Fibrosis. In preparation.
4. Steele MP, Schwarz MI, Coldren CD, Leach SM, Fingerlin TE, Murphy E, Lin J, Cosgrove GP, Lynch D, Groshong S, Cool C, Brown KK, Schwartz DA, **Yang IV**. mRNA and miRNA Expression Changes Associated with Severity of Lung Function Impairment in IIP. In preparation.
5. **Yang IV***, Leach S*, Turner J, Kummer N, Brown J, Murphy E, Farias-Hesson E, Sisneros N, Wang Z, Coldren C, Correll M, Geraci M, Kaminski N, Quackenbush J, Scirba F, Spira A, Schwartz DA. Somatic Mutations in the Lungs of Patients with Idiopathic Pulmonary Fibrosis. In preparation. (*co-first authors)
6. **Yang IV**. Epigenetics of Idiopathic Pulmonary Fibrosis. *Epigenomics* (invited review). In preparation.

Book Chapters and Review Articles:

1. **Yang IV** "Creating and hybridizing spotted DNA arrays", In Encyclopedia of Genetics, Genomics, Proteomics, and Bioinformatics, (Dunn, M.J., Jorde, L.B., Little, P.F.R., and Subramaniam, S., Eds.), Wiley, New York 2005.
2. **Yang IV** "The use of spike-in controls in microarray experiments", in Methods in Enzymology, Kimmel, A. R. and Oliver, B., eds, Elsevier, 411, 50-63 (2006).
3. Brass DM, Tomfohr J, **Yang IV**, Schwartz DA. Using mouse genomics to understand idiopathic interstitial fibrosis. *Proc. Am. Thorac. Soc.* **4**, 92-100 (2007).
4. **Yang IV** and Schwartz DA. Epigenetic Control of Gene Expression in the Lung. *Am. J. Resp. Crit. Care Med.* **183**:1295-1301 (2011).

Abstracts Presented at Conferences:

1. **Verona I**, Thorp HH. Detection and mechanism of trinucleotide repeat expansion. Inorganic Biochemistry Summer Workshop, Athens GA, 1998
2. **Verona I**, Thorp HH. Role of slipped DNA structures in trinucleotide repeat disorders studied using an electron-transfer metallonuclease. American Chemical Society Meeting, Anaheim CA, 1999
3. **Yang IV**, Armistead PM, Thorp HH. Detection of subfemtomole quantities of amplicons of HER-2 mRNA immobilized on metal oxide electrodes. Era of Hope Department of Defense Breast Cancer Research Meeting, Atlanta GA, 2000
4. **Yang IV**, Thorp HH. Electron transfer from 7-deazaguanine to ruthenium polypyridyl complexes. American Chemical Society Meeting, Washington DC, 2000
5. **Yang IV**, Chen E., Gaspard RM., Hasseman JP, Yu Y, Lee, NH, Lazaridis E, Yeatman TJ, Quackenbush J. Towards a statistical foundation for differential expression in microarrays. Genome Sequencing and Biology Meeting, Cold Spring Harbor NY, 2001
6. **Yang IV**, Chen E, Hasseman JP, Coppola D, Yeatman TJ, Quackenbush J. Gene expression fingerprints for molecular classification of cancer. New Frontiers in Cancer Detection and Diagnosis Gordon Research Conference, Ventura CA, 2002
7. **Yang IV**, Chen E, Hasseman JP, Coppola D, Yeatman TJ, Quackenbush J. Gene expression fingerprints for molecular classification of cancer. Oncogenomics 2002
8. **Yang IV**, Kwong KY, Chen E, Hasseman JP, Coppola D, Yeatman TJ, Quackenbush J. Gene expression fingerprints for molecular classification of cancer. Genome Sequencing and Biology Meeting, Cold Spring Harbor NY, 2002
9. **Yang IV**, Bloom GC, Kwong KY, Chen E., Hasseman JP, Coppola D, Yeatman, TJ, Quackenbush J. Gene expression fingerprints for molecular classification of cancer. Aspen Cancer Conference, Aspen CO, 2002
10. **Yang IV**, Bloom GC, Kwong KY, Chen E, Hasseman JP, Coppola D, Yeatman TJ, Quackenbush J. Universal gene chip based human tumor classification. NCI Director's Challenge PI Meeting, Bethesda MD, 2002
11. **Yang IV**, Burch LH, Dressman HK, Whitehead GS, Berman KG, Schwartz DA. Lypopolysaccharide(LPS)-mediated immune and stress responses. EU-US Workshop on Molecular Signatures of DNA Damage Induced Stress Response, Cortona Italy, 2003

12. **Yang IV**, Burch LH, Savov JD, Hollingsworth JW, Berman KG, Galvin JA, Steele MP, Schwartz DA. Gene Expression Analysis of the Idiopathic Interstitial Pneumonias. NIEHS Toxicogenomics Research Consortium (TRC) Meeting, Seattle WA, 2003
 13. **Yang IV**, Yu Y, Sundry JS, Foss CM, Berman KG, McElvania-Tekkipe E, Quackenbush J, Schwartz DA. Identifying asthma susceptibility genes by gene expression profiling of airway epithelial cells following subsegmental airway challenges. International Congress of Immunology/FOCIS Annual Meeting, Montreal QC, 2004
 14. **Yang IV**, Burch LH, Steele MP, Savov JD, Hollingsworth JW, Berman KG, Speer MC, Brown KK, Schwarz MI, Schwartz DA. Gene Expression Profiling Distinguishes Familial and Non-familial Forms of Pulmonary Fibrosis. NIEHS Toxicogenomics Research Consortium (TRC) Meeting, Chapel Hill NC, 2004
 15. **Yang IV**, Burch LH, Steele MP, Savov JD, Hollingsworth JW, Berman KG, Speer MC, Brown KK, Schwarz MI, Schwartz DA. Gene expression profiling distinguishes familial and non-familial forms of pulmonary fibrosis. American Thoracic Society International Conference, San Diego CA, 2005
- Selected as one of the 24 abstracts best representing focus and quality of research presented at the conference*
16. **Yang IV**, Burch LH, Vinogradova T, Rutledge HR, Schwartz DA. Genetic determinants of inter-strain variability following systemic LPS challenge. Gene Expression and Signaling in the Immune System Meeting, Cold Spring Harbor NY, 2006
 17. **Yang IV**, Burch LH, Vinogradova T, Rutledge HR, Schwartz DA. Genetic determinants of inter-Strain variability following systemic LPS challenge. American Thoracic Society International Conference, San Diego CA, 2006
 18. **Yang IV**, Burch LH, Vinogradova T, Rutledge HR, Schwartz DA. Genetic determinants of inter-strain variability following systemic LPS challenge. NIEHS Toxicogenomics Research Consortium (TRC) Meeting, Chapel Hill NC, 2006
 19. **Yang IV**, Rutledge H, Yang J, Ramsberger J, Schwartz DA. A novel locus on murine Chromosome 9 is associated with the systemic response to LPS. NIEHS Toxicogenomics Research Consortium (TRC) Meeting, Chapel Hill NC, 2006
 20. **Yang IV**, Wade CM, Kang HM, Alper S, Rutledge HR, Lackford B, Eskin E, Daly MJ, Schwartz DA. Identification of Novel Innate Immunity Genes in Mice In response to Systemic LPS. NIH Intramural Research Festival, Bethesda MD, 2007
 21. **Yang IV**, Wade CM, Kang HM, Alper S, Rutledge HR, Lackford B, Eskin E, Daly MJ, Schwartz DA. Identification of Novel Innate Immunity Genes in Mice In response to Systemic LPS. Keystone Innate Immunity Meeting, Keystone CO 2008
 22. **Yang IV**, Wade CM, Kang HM, Alper S, Rutledge HR, Lackford B, Eskin E, Daly MJ, Schwartz DA. Identification of Novel Innate Immunity Genes in Mice In response to Systemic LPS. American Thoracic Society International Conference, Toronto ON, 2008
 23. **Yang IV**, Alper S, Lackford B, Rutledge HR, Burch LH, Schwartz DA. Regulation of Gene Expression in the Liver, Lung, and Spleen of Sensitive and Resistant Strains of Mice In Responses to Systemic LPS. American Thoracic Society International Conference, Toronto ON, 2008

24. **Yang IV**, Rutledge HR, Yang J, Schwartz DA. Study of Positional Candidates within the Locus on Chromosome 9 Associated with Response to Systemic LPS. American Thoracic Society International Conference, Toronto ON, 2008
25. **Yang IV**, Jiang W, Rutledge HR, Lackford B, Pisetsky DS, Schwartz DA. Identification of Novel Innate Immune Gene Expression Profiling of RAW264.7 Macrophages Stimulated with LPS, Poly(I:C) and CpG DNA. American Thoracic Society International Conference, Toronto ON, 2008
26. Rutledge HR, Jiang W, Yang J, Pisetsky DS, Schwartz DA, **Yang IV**. Gene Expression Profiles of RAW264.7 Macrophages Stimulated with two Commonly Used Preparations of LPS. American Thoracic Society International Conference, Toronto ON, 2008
27. **Yang IV**, Warg LA, Davidson EJ, Kelada SNP, Kubalanza K, Collins FC, Miller D, Chesler E, Churchill G, Aylor D, Pardo-Manuel de Villena F, Schwartz DA. Innate Immune Gene Discovery Using Macrophage Response to Pathogen-Associated Molecular Patterns (PAMPS). Aspen Lung Conference, Aspen CO, 2009
28. **Yang IV**, Warg LA, Davidson EJ, Kelada SNP, Kubalanza K, Collins FC, Miller D, Chesler E, Churchill G, Aylor D, Pardo-Manuel de Villena F, Schwartz DA. Innate Immune Gene Discovery Using Macrophage Response to Pathogen-Associated Molecular Patterns (PAMPS). International Mammalian Genome Society, La Jolla CA, 2009.
29. **Yang IV**, Warg LA, Davidson EJ, Kelada SNP, Kubalanza K, Collins FC, Miller D, Chesler E, Churchill G, Aylor D, Pardo-Manuel de Villena F, Schwartz DA. Innate Immune Gene Discovery Using Macrophage Response to Pathogen-Associated Molecular Patterns (PAMPS). American Thoracic Society International Conference, New Orleans LA, 2010
30. **Yang IV**, Warg LA, Groshong S, Schwartz DA. The Role of the E2F1 Transcription Factor in Innate Immunity in Mice. American Thoracic Society International Conference, New Orleans LA, 2010
31. **Yang IV**, Warg LA, Alper S, Schwartz DA. Association of Polymorphisms in Known and Novel Innate Immune Genes with Gram Negative Bacteremia. American Society of Human Genetics, Washington DC, 2010
32. **Yang IV**, Cosgrove GP, Davidson EJ, Hennessy C, Brown J, Turner J, Leach S, Willis-Owen SA, von Mutius E, Moffatt MF², Cookson WO, and Schwartz DA. DNA Methylation Patterns in Siblings with and without Asthma. Roadmap Epigenomics PI Meeting, Bethesda MD, 2010
33. **Yang IV**, Warg LA, Schwartz DA. miRNA Regulation of Innate Immune Response in E2F1-deficient Mice. Keystone MicroRNAs and Human Disease Conference, Banff Canada, 2011
34. **Yang IV**, Warg LA, Alper S, Schwartz DA. Association of Polymorphisms in Known and Novel Innate Immune Genes with Gram Negative Bacteremia. American Thoracic Society International Conference, Denver CO, 2011
35. **Yang IV**, Leach S, Turner J, Kummer N, Brown J, Murphy E, Farias-Hesson E, Sisneros N, Wang Z, Coldren C, Correll M, Geraci M, Kaminski N, Quackenbush J, Scirba F, Spira A, Schwartz DA. Somatic Mutations in the Lungs of Patients with Idiopathic Pulmonary Fibrosis. American Thoracic Society International Conference, Denver CO, 2011
36. **Yang IV**, Luna LG, Coldren CD, Fingerlin TE, Leach S, Murphy E, Lin J, Cosgrove GP, Lynch D, Groshong SD, Brown KK, Schwarz MI, Schwartz DA. Genes and miRNAs Associated with Severity of Lung Function Impairment in Idiopathic Interstitial Pneumonias (IIPs). American Thoracic Society International Conference, Denver CO, 2011

37. **Yang IV**, Hennessy C, Davidson E, Bonney M, Leach S, Brown J, Turner J, Juan Guardela B, Tedrow J, Correll M, Geraci M, Kaminski N, Quackenbush J, Sciurba F, Spira A, Schwartz DA. Genome-Wide DNA Methylation Patterns in Interstitial Lung Disease (ILD) and Chronic Obstructive Lung Disease (COPD). American Thoracic Society International Conference, Denver CO, 2011

Talks Selected from Submitted Abstracts:

1. Universal gene chip based human tumor classification. NCI Director's Challenge PI Meeting, Bethesda MD, 2002
2. Universal gene chip based human tumor classification. Society of Surgical Oncology Annual Meeting, Los Angeles CA, 2003
3. Gene Expression Analysis of the Idiopathic Interstitial Pneumonias. NIEHS Toxicogenomics Research Consortium (TRC) Meeting, Seattle WA, 2003
4. Identifying asthma susceptibility genes by gene expression profiling of airway epithelial cells following subsegmental airway challenges. International Congress of Immunology/FOCIS Annual Meeting, Montreal QC, 2004
5. Gene expression profiling distinguishes familial and non-familial forms of pulmonary fibrosis. American Thoracic Society International Conference, San Diego CA, 2005
6. Genetic Determinants of Inter-Strain Variability Following Systemic LPS Challenge. American Thoracic Society International Conference, San Diego CA, 2006
7. Genetics of Innate Immunity. Toxicogenomics Research Consortium (TRC) Meeting, Chapel Hill NC, 2006
8. Regulation of Gene Expression in the Liver, Lung, and Spleen of Sensitive and Resistant Strains of Mice In Responses to Systemic LPS. American Thoracic Society International Conference, Toronto ON, 2008
9. DNA Methylation Patterns in Siblings with and without Asthma. Roadmap Epigenomics PI Meeting, Bethesda MD, 2010
10. Genome-Wide DNA Methylation Patterns in Interstitial Lung Disease (ILD) and Chronic Obstructive Lung Disease (COPD) American Thoracic Society International Conference, Denver CO, 2011

Invited Talks:

1. Cancer classification and survival analysis using gene expression profiling. TAUG Meeting, Research Triangle Park NC, 2003
2. Using spike-in controls and reference RNA in microarray experiments. ERCC Bioinformatics Workshop, NIST Gaithersburg MD, 2004
3. Genetics of Innate Immunity. NIEHS International Women's Day, Research Triangle Park, NC, 2008
4. Endotoxin responsiveness candidate genes: rationale for choosing them. PHARE Symposium, Saskatoon Canada, 2008
5. The role of *in utero* exposures and epigenetics in the development of asthma and atopy. European Respiratory Society Annual Congress, Vienna Austria, 2009

6. Somatic mutations in the lungs of patients with idiopathic pulmonary fibrosis. Sequencing at the Tipping Point. Life Technologies, San Diego CA, 2010
7. Epigenetic control of gene expression in the lung. The Department of Anesthesiology & Mucosal Inflammation Program, University of Colorado School of Medicine, Denver CO, 2010
8. DNA Methylation Patterns in Siblings with and without Asthma. City of Hope Epigenomics Workshop, Los Angeles CA, 2011.
9. Epigenomic Profiles of IPF. Pittsburgh Lung Conference. Pittsburgh PA, 2011.