

## CURRICULUM VITAE

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### **EDUCATION**

- 1982 B.S. in Public health  
Nanchang Health College, Nanchang, China
- 1989 MPH in Nutrition  
Qingdao Medical College, Qingdao, China  
Thesis Title: The availability of dietary fiber in animal model.
- 1996 Ph.D. in Preventive Medicine  
Chinese Academy of Preventive Medicine, Beijing, China  
Dissertation title: Selenium and iodine interaction for the development of Iodine Deficiency Disorders and Keshan disease in animal model and population.
- 2003 M.S. in Applied Biostatistics/Epidemiology  
University of Southern California, Los Angeles, CA,  
Thesis Title: Dietary fiber and progression of atherosclerosis: the Los Angeles Atherosclerosis Study

### **TRAINING**

- 1997-1998 Postdoctoral fellow  
Department of Toxicology/Pharmacology, University of Louisville,  
Louisville, KY
- 1998-1999 Postdoctoral fellow  
Division of Hematology/Oncology, Department of Medicine, University of Cincinnati, Cincinnati, OH

## **ACADEMIC APPOINTMENTS**

- 1999-2000    Research scientist  
American Health Foundation, Valhalla, NY
- 2003-2004    Biostatistician  
Division of Cancer Biostatistics/VICC  
Biostatistics Shared Resource  
Department of Biostatistics  
Vanderbilt University School of Medicine
- 2004-2007    Assistant in Biostatistics  
Division of Cancer Biostatistics  
Department of Biostatistics  
Biostatistics Shared Resource  
Vanderbilt University School of Medicine
- 2007-2011    Associate in Biostatistics  
Division of Cancer Biostatistics  
Department of Biostatistics  
Cancer Biostatistics Center  
Vanderbilt University School of Medicine
- 2012-present    Research Assistant Professor of Biostatistics  
Center for Quantitative Sciences  
Division of Cancer Biostatistics  
Department of Biostatistics  
Vanderbilt University School of Medicine

## **PROFESSIONAL ORGANIZATIONS**

- 2002-present    American Statistical Association

## **PROFESSIONAL ACTIVITIES**

### **Intramural Services:**

- 2006-present    Member of High-dimensional Data Analysis Core
- 2005-present    Member of Master Statisticians Search Committee
- 2007-present    Biostatistics clinics (Omics)
- 2010            Bioinformatics clinic
- 2004-2009    Leader of data logic checking team for Tennessee Colorectal Polyp Study
- 2006            Co-leader of Continual Quality Improvement/Continuing Education (CQI project)
- 2008-present    Junior statisticians mentoring
- 2009-present    Consulting expert for Vanderbilt Institute for Clinical and Translational Research (VICTR)
- 2003-present    Data analysis and interpretation, and manuscript review and writing
- 2006-present    Study design and statistical analysis strategy development consulting
- 2006-present    Manuscript review comments response (statistical issues)

- 2009-present Grant writing (statistical section)  
 2012-present Member of Thoracic Surgery, Research, Epidemiology, Diagnosis, And Treatment (TREAT) Lung Cancer Program

**Intramural Seminars and Lectures:**

- 2005 Measurement error and measurement model, Department Master Statisticians Continuing Education  
 2005 Mediation model and its application in clinical study, Cancer Biostatistics Division meeting.  
 2007 Multiple Comparisons and Multiple hypothesis tests, Cancer Biostatistics Division meeting.  
 2007 An alternative to dose-response association, Department Seminar Series  
 2008 Spline regression in observational study. VICC Workshop  
 2010 Confounding, interaction, and mediation in multivariable regression modeling. VICC Workshop  
 2010 Review of siRNA normalization and analysis approaches. High-dimensional Data Analysis Core group meeting.

**Extramural (Invited talks and Presentations)**

- 05/28/2005 Invited speaker: An analysis plan for the case-cohort study of Genetic Consequences of Cancer Treatment. The 2<sup>nd</sup> annual GCCT meeting, Copenhagen, Demark  
 05/17/2006 Invited speaker: Preliminary results of cancer survivors' radiation exposure and abnormal pregnancy outcomes. The 3rd annual GCCT meeting, Nashville  
 05/17/2009 Invited speaker: Some statistical issues involved in the case-cohort study. The 4<sup>th</sup> annual GCCT meeting, Oklahoma City  
 03/12/2011 Invited speaker: Feature selection, signature construction, and association study. The 2<sup>nd</sup> International Applied Statistics Forum, Tamkang University, Taipei, Taiwan  
 09/17/1997 Poster presentation: Wu H, Kang YJ. Cardiac metallothionein overexpressing transgenic mice are resistant to glutathione deficiency induced doxorubicin cardiotoxicity. MT-97, Kansas City, Missouri.  
 11/03/2001 Poster presentation: Wu H, Shircore A, Dwyer JH. In contrast to serum lipid, smoking is echogenicity in common carotid artery wall. The Los Angeles Atherosclerosis Study. Principle Investigator Meeting on Tobacco Use, Los Angeles, CA  
 02/25/2003 Awarded presentation: Dwyer JH, Wu H, Dwyer MK, Lusis AJ. Dietary arachidonic acid and linoleic acid are atherogenic while fish oils are protective, in a variant 5-lipoxygenase promoter genotype. *Circulation*. Scientific section abstract  
 04/08/2005 Poster presentation: Wu H, Gonzales A, Shyr Y. A mediating effect of AKT signaling in osteosarcosis clinical study. Keystone Symposia, Proteomics and Bioinformatics. Keystone, CO

08/02/2010 Oral presentation: Wu H, Chen Q, Koyama T. A comparative study of detection limit methods in biomarker measurement. JSM (SPORE). Vancouver, Canada

### **REVIEW RESPONSIBILITY**

Ad hoc manuscript reviewer for:  
Journal of Clinical Oncology  
Journal of Clinical Investigation

### **HONORS AND AWARDS**

- 1993 National Award for the Advancement in Science and Technology (major participant of this team award)
- 1996 Excellence in Ph.D. dissertation Award from the Chinese Academy of Preventive Medicine.
- 2006 Departmental recognition award
- 2010 Departmental recognition award

### **PEER REVIEWED PUBLICATIONS [1-28]**

#### **Articles in refereed journals**

1. Wu H, Xia YM, Ha PC, Chen XS: Changes in myocardial thyroid hormone metabolism and alpha-glycerophosphate dehydrogenase activity in rats deficient in iodine and selenium. *Br J Nutr* 1997, 78:671-676.
2. Wu H, Kang YJ: Inhibition of buthionine sulfoximine-enhanced doxorubicin toxicity in metallothionein overexpressing transgenic mouse heart. *J Pharmacol Exp Ther* 1998, 287:515-520.
3. Yin X, Wu H, Chen Y, Kang YJ: Induction of antioxidants by adriamycin in mouse heart. *Biochem Pharmacol* 1998, 56:87-93.
4. Li W, Lan Z, Wu H, Wu S, Meadows J, Chen J, Zhu V, Dai W: BUBR1 phosphorylation is regulated during mitotic checkpoint activation. *Cell Growth Differ* 1999, 10:769-775.
5. Lan Z, Wu H, Li W, Wu S, Lu L, Xu M, Dai W: Transforming activity of receptor tyrosine kinase tyro3 is mediated, at least in part, by the PI3 kinase-signaling pathway. *Blood* 2000, 95:633-638.
6. Wu H, Lan Z, Li W, Wu S, Weinstein J, Sakamoto KM, Dai W: p53CDC/hCDC20 is associated with BUBR1 and may be a downstream target of the spindle checkpoint kinase. *Oncogene* 2000, 19:4557-4562.
7. Kang YJ, Wu H, Saari JT: Alterations in hypertrophic gene expression by dietary copper restriction in mouse heart. *Proc Soc Exp Biol Med* 2000, 223:282-287.
8. Xie S, Wang Q, Wu H, Cogswell J, Lu L, Jhanwar-Uniyal M, Dai W: Reactive oxygen species-induced phosphorylation of p53 on serine 20 is mediated in part by polo-like kinase-3. *J Biol Chem* 2001, 276:36194-36199.

9. Xie S, Wu H, Wang Q, Cogswell JP, Husain I, Conn C, Stambrook P, Jhanwar-Uniyal M, Dai W: Plk3 functionally links DNA damage to cell cycle arrest and apoptosis at least in part via the p53 pathway. *J Biol Chem* 2001, 276:43305-43312.
10. Liby K, Wu H, Ouyang B, Wu S, Chen J, Dai W: Identification of the human homologue of the early-growth response gene Snk, encoding a serum-inducible kinase. *DNA Seq* 2001, 11:527-533.
11. Xie S, Wu H, Wang Q, Kunicki J, Thomas RO, Hollingsworth RE, Cogswell J, Dai W: Genotoxic stress-induced activation of Plk3 is partly mediated by Chk2. *Cell Cycle* 2002, 1:424-429.
12. Wu H, Dwyer KM, Fan Z, Shircore A, Fan J, Dwyer JH: Dietary fiber and progression of atherosclerosis: the Los Angeles Atherosclerosis Study. *Am J Clin Nutr* 2003, 78:1085-1091.
13. Dwyer JH, Allayee H, Dwyer KM, Fan J, Wu H, Mar R, Lusic AJ, Mehrabian M: Arachidonate 5-lipoxygenase promoter genotype, dietary arachidonic acid, and atherosclerosis. *N Engl J Med* 2004, 350:29-37.
14. Boyd AS, Wu H, Shyr Y: Monster cells in malignant melanoma. *Am J Dermatopathol* 2005, 27:208-210.
15. Cuneo KC, Geng L, Tan J, Brousal J, Shinohara ET, Osusky K, Fu A, Shyr Y, Wu H, Hallahan DE: SRC family kinase inhibitor SU6656 enhances antiangiogenic effect of irradiation. *Int J Radiat Oncol Biol Phys* 2006, 64:1197-1203.
16. Fowler K, Poehling K, Billheimer D, Hamilton R, Wu H, Mulder J, Frangoul H: Hospice referral practices for children with cancer: a survey of pediatric oncologists. *J Clin Oncol* 2006, 24:1099-1104.
17. Kim DW, Blanke CD, Wu H, Shyr Y, Berlin J, Beauchamp RD, Chakravarthy B: Phase II study of preoperative paclitaxel/cisplatin with radiotherapy in locally advanced esophageal cancer. *Int J Radiat Oncol Biol Phys* 2007, 67:397-404.
18. Shin A, Shrubsole MJ, Ness RM, Wu H, Sinha R, Smalley WE, Shyr Y, Zheng W: Meat and meat-mutagen intake, doneness preference and the risk of colorectal polyps: The Tennessee colorectal polyp study. *Int J Cancer* 2007, 121:2890-2896.
19. Tang YW, Li H, Wu H, Shyr Y, Edwards KM: Host single-nucleotide polymorphisms and altered responses to inactivated influenza vaccine. *J Infect Dis* 2007, 196:1021-1025.
20. Tang Y, Han T, Everts M, Zhu ZB, Gillespie GY, Curiel DT, Wu H: Directing adenovirus across the blood-brain barrier via melanotransferrin (P97) transcytosis pathway in an in vitro model. *Gene Ther* 2007, 14:523-532.
21. Wu H, MN, Gonzalez A, and Shyr Y: An EGFR and AKT signaling pathway was identified with mediation model in osteosarcomas clinical study. *Biomarker Insight* 2007, 2:469-476.
22. Xu BJ GA, Kikuchi T, Yanagisawa K, Massion PP, Wu H, Mason SE, Olson SJ, Shyr Y, Carbone DP, and Caprioli RM: MALDI-MS derived prognostic protein markers for resected non-small cell lung cancer. *Proteomics Clin Appl* 2008, 2:1508-1517.
23. Shrubsole MJ, Wu H, Ness RM, Shyr Y, Smalley WE, Zheng W: Alcohol drinking, cigarette smoking, and risk of colorectal adenomatous and hyperplastic polyps. *Am J Epidemiol* 2008, 167:1050-1058.
24. Ware LB KT, Billheimer DD, Wu H, Bernard GR, Thompson BT, Brower RG, Standiford TJ, Martin TR, Matthay MA: Prognostic and pathogenic value of

- combining clinical and biochemical indices in patients with acute lung injury. *Chest* 2009, [Epub ahead of print]. PMID: 19858233.
25. Wu H, Dai Q, Shrubsole MJ, Ness RM, Schlundt D, Smalley WE, Chen H, Li M, Shyr Y, Zheng W: Fruit and vegetable intakes are associated with lower risk of colorectal adenomas. *J Nutr* 2009, 139:340-344.
  26. Fremont RD, Koyama T, Calfee CS, Wu H, Dossett LA, Bossert FR, Mitchell D, Wickersham N, Bernard GR, Matthay MA, May AK, Ware LB: Acute lung injury in patients with traumatic injuries: utility of a panel of biomarkers for diagnosis and pathogenesis. *J Trauma* 2010, 68:1121-1127.
  27. Miller TW, Balko JM, Ghazoui Z, Dunbier A, Anderson H, Dowsett M, Gonzalez-Angulo AM, Mills GB, Miller WR, Wu H, Shyr Y, Arteaga CL: A Gene Expression Signature from Human Breast Cancer Cells with Acquired Hormone Independence Identifies MYC as a Mediator of Antiestrogen Resistance. *Clin Cancer Res* 2011, 17:2024-2034.
  28. Winther JF, Olsen JH, Wu H, Shyr Y, Mulvihill JJ, Stovall M, Nielsen A, Schmiegelow M. Genetic disease in the children of Danish survivors of childhood and adolescent cancer. *JCO* 2012, 30(1):27-33

#### **Papers submitted**

1. Wu H, Chen Q, Koyama T, Ware L. A Bayesian Approach for Generalized Linear Model with an Explanatory Biomarker Measurement Variable Subject to Detection Limit – an Application to Acute Lung Injury. *J Appl Stat.* 2011 (accepted)
2. Ye F, Bauer JA, Wu H, Pietenpol JA, Shyr Y. Analysis of High-Throughput RNAi Screening Data in Identifying Genes Mediating Sensitivity to Chemotherapeutic Drugs. *BMC Bioinformatics* 2010 (under second review)
3. Fu Z, Shrubsole M, Smalley W, Wu H, Chen Z, Shyr Y, Ness R, Zheng W. Lifestyle factors and their combined impact on the risk of colorectal polyps. *AJE* 2012 (accepted)