

DANA BOWLING HANCOCK, Ph.D.

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Education

Ph.D., Genetics and Genomics 05/2008
Duke University, Durham, NC
Dissertation title: "Nitric oxide synthase genes, environmental factors,
and complex interactions in families with Parkinson's disease"
Mentor: William Scott, Ph.D.

B.S., Biochemistry 05/2004
North Carolina State University, Raleigh, NC
Summa cum laude, minor in Genetics
Study abroad in Florence, Italy and Vienna, Austria

Professional Experience

Research

Postdoctoral Fellow 05/2008-present
National Institutes of Health, National Institute of Environmental Health Sciences (NIH/NIEHS),
Epidemiology Branch, Research Triangle Park, NC
Genome-wide association studies and corresponding gene-environment interaction analyses
in family-based and population-based case-control samples of respiratory diseases, including
asthma and chronic obstructive pulmonary disease
Mentor: Stephanie London, M.D., Dr.P.H.

Graduate Research Assistant 01/2005-05/2008
Duke University, Department of Medicine, Durham, NC
Association studies of genetic and environmental factors in families with Parkinson's disease
and empirical comparison of analytic methods for modeling gene-gene and gene-
environment interactions in family-based data
Mentor: William Scott, Ph.D.

Rotating Graduate Research Assistant 11/2004-12/2004
Duke University, Department of Medicine, Durham, NC
Linkage analysis in families with Focal Segmental Glomerulosclerosis
Mentor: William Scott, Ph.D.

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Rotating Graduate Research Assistant 08/2004-11/2004
Duke University, Department of Pediatrics, Durham, NC
Gene therapy using adenovirus in Acid Maltase Deficiency (or Pompe's disease)
Mentor: Andrea Amalfitano, D.O., Ph.D.

Research and Development Intern 01/2004-05/2004
King Pharmaceuticals Inc., Cary, NC
Validation review of visual analog scales for clinical pain and symptom assessment
Mentor: Robert Roller, Pharm.D.

Undergraduate Research Assistant 05/2002-12/2003
North Carolina State University, Department of Genetics, Raleigh, NC
Molecular genetic mechanisms of body pattern specification in *Drosophila melanogaster*
Mentor: James Mahaffey, Ph.D.

Teaching

Certificate in Teaching College Biology Recipient 05/2008
Duke University, Durham, NC
University of North Carolina at Greensboro, Department of Public Health Education
Mentor: Beverly Rockhill-Levine, Ph.D.

Guest Lecturer, Honors Biology 04/2007
Southern High School, Durham, NC

Teaching Assistant, Genetic Analysis of Human Disease 01/2006-05/2006
Duke University, Clinical Research Training Program, Durham, NC

Guest Lecturer, Honors Biology 12/2005
JF Webb High School, Oxford, NC

Teaching Assistant, Principles of Biochemistry 01/2003-05/2003
North Carolina State University, Department of Biochemistry, Raleigh, NC

Teaching Assistant, Introduction to Engineering 08/2001-12/2001
North Carolina State University, College of Engineering, Raleigh, NC

Publications

Peer-Reviewed Articles

Hancock DB, Martin ER, Vance JM, Scott WK (2008). Nitric oxide synthase genes and their interactions with environmental factors in Parkinson's disease. *Neurogenetics*, in press.

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Hancock DB, Martin ER, Mayhew GM, Stajich JM, Jewett R, Stacy MA, Scott BL, Vance JM, Scott WK (2008). Pesticide exposure and risk of Parkinson's disease: a family-based case-control study. *BioMed Central Neurology* 8(6).

Hancock DB, Martin ER, Li YJ, Scott WK (2007). Methods for interaction analyses using family-based case-control data: conditional logistic regression versus generalized estimating equations. *Genetic Epidemiology* 31(8):883-893.

Hancock DB, Martin ER, Stajich JM, Jewett R, Stacy MA, Scott BL, Vance JM, Scott WK (2007). Smoking, caffeine, and nonsteroidal anti-inflammatory drugs as protective factors in families with Parkinson disease. *Archives of Neurology* 64(4):576-580.

Hancock DB, Martin ER, Fujiwara K, Stacy MA, Scott BL, Stajich JM, Jewett R, Li YJ, Hauser MA, Vance JM, Scott WK (2006). *NOS2A* and the modulating effect of cigarette smoking in Parkinson's disease. *Annals of Neurology* 60(3):366-373.

Robertson LK, **Bowling DB**, Mahaffey JP, Imiolczyk B, and Mahaffey JW (2004). An interactive network of zinc-finger proteins contributes to regionalization of the *Drosophila* embryo and establishes the domain of HOM-C protein function. *Development* 131(12):2781-2789.

Book Chapter

Hancock DB and Scott WK (2007). Population-based case-control association studies. *Current Protocols in Human Genetics*, Supplement 52. John Wiley & Sons, Inc.

Meeting Abstracts and Presentations

Hancock DB, Martin ER, Scott WK (2008). Potential interactions among NOS genes in Parkinson disease. 17th annual International Genetic Epidemiology Society meeting. St. Louis, MO. [Poster]

Hancock DB, Martin ER, Vance JM, Scott WK (2007). Interactions involving nitric oxide synthase genes and environmental risk factors in Parkinson's disease. 57th annual American Society of Human Genetics meeting. San Diego, CA. [Platform]
Available from <http://www.ashg.org/genetics/ashg07s/index.shtml>

Hancock DB, Martin ER, Vance JM, Scott WK (2007). Nitric oxide synthase genes may influence risk of Parkinson's disease. 9th annual Morris K. Udall Centers of Excellence for Parkinson's Disease Research meeting. Pittsburgh, PA. [Poster]

Hancock DB, Martin ER, Li YJ, Scott WK (2006). Gene-gene interaction methods for family-based case-control data. 56th annual American Society of Human Genetics meeting. New Orleans, LA. [Platform]
Available from <http://www.ashg.org/genetics/ashg06s/index.shtml>

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Hancock DB, Martin ER, Hauser MA, Li YJ, Vance JM, Scott WK (2006). Association of iNOS in Parkinson disease and the modulating effect of cigarette smoking. 1st World Parkinson Congress meeting. Washington DC. [Poster]
Available from *Movement Disorders* 21(S13):S55.

Kang SJ, van der Walt JM, **Hancock DB**, Scott WK, Li YJ, Hauser MA, Martin ER, Vance JM (2005). Candidate gene analysis for Parkinson disease. 7th annual Morris K. Udall Centers of Excellence for Parkinson's Disease Research meeting. Boston, MA. [Poster]

Hancock DB, Wheeler BS, Tegnell E, Hauser MA, Martin ER, Vance JM, Scott WK. Association between iNOS and early-onset Parkinson disease (2005). 55th annual American Society of Human Genetics 55th meeting. Salt Lake City, UT. [Poster]
Available from <http://www.ashg.org/genetics/ashg05s/index.shtml>

Previous Research Support

1F31NS056632-01 (PI: **Hancock DB**) 08/2006–05/2008
NIH/NINDS, Ruth L. Kirschstein National Service Research Award
“Genetic and environmental modifiers of Parkinson disease”

Honors and Awards

NIH Postdoctoral Intramural Research Training Award Fellowship	05/2008-present
University of Washington, Summer Institute in Statistical Genetics Scholarship	06/2007
World Parkinson Congress Junior Scholar Award	02/2005
North Carolina State University Valedictorian	05/2004
Stephanie C. Anderson Memorial Scholarship	08/2003-05/2004
Aubrey Lee Brooks Foundation Scholarship	08/2000–05/2004
NC State Chancellor's Leadership Award	08/2000–05/2002

Professional Affiliations

Member, International Genetic Epidemiology Society	01/2006-present
Member, American Society of Human Genetics	01/2005-present

Peer Reviewer for Journals

American Journal of Epidemiology
Neurodegenerative Diseases