Curriculum Vitae

David W. Threadgill

Education

Post-doc, Case Western Reserve University, Genetics
PhD, 1989, Texas A&M University, Genetics
BS, 1983, Texas A&M University, Zoology

Positions

Professor, Department of Veterinary Pathobiology, Texas A&M University, 2013-present
Professor, Department of Molecular and Cellular Medicine, Texas A&M University Health Science Center, 2013-present
Professor and Head, Department of Genetics, North Carolina State University, 2008-2013
Assistant, Associate, Professor of Genetics, University of North Carolina, 2000-2008
Assistant Professor of Cell Biology, Vanderbilt University, 1996-2000

Professional Experience

Director, Whole Systems Genomics Initiative, Texas A&M University, 2013-present
Adjunct Professor of Biological Sciences, North Carolina State University, 2013-present
Deputy Director, Center for Human Health and the Environment, North Carolina State University, 2011-2013
Associate Member, Department of Environmental and Molecular Toxicology, North Carolina State University, 2009-1013
Member, Center for Comparative Medicine and Translational Research, College of Veterinary Medicine, North Carolina State University, 2009-present; Executive Committee, 2011-2013
Adjunct Professor of Genetics, University of North Carolina, 2008-2013
Member, Center for Gastrointestinal Biology & Disease, University of North Carolina/North Carolina State University, 2001-2013
Member, Lineberger Comprehensive Cancer Center, University of North Carolina, 2000-2013
Visiting Distinguished Scientist, Biosciences Division, Oak Ridge National Laboratory, 2006-2008
Member, Carolina Center for Genome Sciences, University of North Carolina, 2002-2008, Leader of Mammalian Genomics Group, 2003-2005; Member of Executive Committee, 2003-2008
Member, Center for Environmental Health and Susceptibility, University of North Carolina, 2003-2008; Executive Committee and Leader of Trans-omics Research Core, 2004-2008
Member, Carolina Cardiovascular Biology Center, University of North Carolina, 2005-2008
Member, Nutrition Obesity Research Center, University of North Carolina, 2004-2008
Member, Curriculum in Bioinformatics and Computational Biology, 2006-2008
Member, Curriculum in Toxicology, University of North Carolina, 2001-2008; Elected Member of Executive Committee, 2005-2008; Graduate Admissions Committee, 2005-2007
Member, Curriculum in Genetics and Molecular Biology, University of North Carolina, 2000-2008; Graduate Admission Committee, 2000-2001; Director of Admissions, 2003-2006
Adjunct Professor, Dept of Biology, North Carolina Central University, Durham, NC, 2002-2003
Founding Director, Vanderbilt Microarray Shared Resource, Vanderbilt, 1998-2000
Member, Vanderbilt-Ingram Comprehensive Cancer Center, Vanderbilt University, 1996-2000
Associate Member, Department of Medicine (Gastroenterology), Vanderbilt University, 1998-2000

Leadership Training

NC State ADVANCE Program, Department Heads Workshop: Developing Diverse Departments, 2011

Memberships

American Physiological Society
Society of Toxicology
American Association for Cancer Research
Genetics Society of America
Complex Trait Community (formerly Complex Trait Consortium, co-founder)
International Mammalian Genome Society
Environmental Mutagen Society
American Association for the Advancement of Science

Honors and Awards

Tom and Jean McMullin Chair of Genetics, Texas A&M University Health Science Center, 2013-present
Society of Toxicology Perry J. Gehring Risk Assessment Award with Postdoctoral Fellow Michelle DeSimone, 2012
Elected Fellow of the American Association for the Advancement of Science (AAAS), 2011
National Institutes of Health College of CSR Reviewers, 2010-2012
Society of Toxicology award for Most Influential Paper Affecting the Science of Risk Assessment (Genome Research 19:1507-1515), 2010
Society of Toxicology Best Manuscript Award from the Occupational and Public Health Specialty Section with Postdoctoral Fellow Michele LaMerrill (American Journal of Physiology-Endocrinology and Metabolism 296:E203-210), 2009
UNC-Lineberger Comprehensive Cancer Center Clinical/Translational Research Award, 2005
Jefferson Pilot Scholar Award, 2004
V Foundation Scholar Award, 1998
March of Dimes Basil O'Conner Award. 1998
NIGMS Individual National Research Service Award, 1991-1993
Outstanding Graduate Award for Research, Texas A&M University, 1989
Young Investigator Travel Award from HGM10 to attend the 10th International Workshop on Human Gene Mapping, New Haven, CT, 1989
Fellowship to attend the International Summer School on the Molecular Genetics of Differentiation. Berlin, Germany, 1989
Graduate Student Travel Award from The Genetics Society of America to attend the XVIth International Congress of Genetics, Toronto, Canada, 1988
Faculty Auxiliary Graduate Award, Texas A&M University School of Veterinary Medicine, 1987

Publications

Books/chapters

Wang W, McMillan L, Threadgill DW, Pardo-Manuel de VIllena F. 2009. 'Efficient data-mining methods enabling genome-wide computing' in Kargupta H, Han J, Yu PS, Motwani, Jumar V (ed), Next Generation of Data Mining, Chapman and Hall, Boca Raton.

Roberts RB, Threadgill DW. 2005. 'The mouse in biomedical research' in Eisen EJ (ed), The Mouse in Animal Genetics and Breeding Research, Imperial College Press, London.

Threadgill DW, Hunter KW, Zou F, Manly KF. 2004. 'Cancer modifiers: detection, localization and identification' in Holland E (ed), Mouse Models of Cancer, John Wiley & Sons, New York.

Boykin R, Threadgill DW. 2002. Genetics definitions in: Child Development, Vol One in the Macmillan Psychology Reference Series.

Peer-reviewed reviews/commentaries/proceedings/news

Welsh CE, Miller DR, Manly KF, Wang J, McMillan L, Morahan G, Mott R, Iraqi FA, Threadgill DW, Pardo-Manuel de Villena F. 2012. Status and access to the Collaborative Cross population. Mammalian Genome 23:706-712.

Threadgill DW, Churchill GA. 2012. Ten years of the Collaborative Cross. Genetics 190:291-294.

Threadgill DW, Miller DR, Churchill GA, Pardo-Manuel de Villena F. 2011. The Collaborative Cross: a recombinant inbred mouse population for the systems genetic era. ILAR Journal 52:24-31.

Schughart K, Arends D, Andreux P, Balling R, Beyer A, Bezerianos A, Brockmann GA, Crusio WE, Campbell-Tofte J, Denny P, Falcon-Perez JM, Forejt J, Franken P, Hovatta I, Iraqi F, Jansen RC, Kaczmarek L, Kas MJ, Kashofer K, Knapska E, Kolisis F, Kõks S, Lammert F, Möller S, Montagutelli X, Morahan G, Mott R, Pfoertner S, Prins P, Przewlocki R, Ranki A, Santos J, Rihet P, Schalkwyk L, Smit AB, Swertz M, Threadgill DW, Vasar E, Zatloukal K. 2011. SYSGENET: a meeting report from a new European network for systems genetics. Mammalian Genome 21:331-336.

Rusyn I, Gatti DM, Wiltshire T, Kleeberger SR, Threadgill DW. 2010. Toxicogenetics: population-based testing of drug and chemical safety in mouse models. Pharmacogenomics 11:1127-1136.

Carroll I, Threadgill DW, Threadgill DS. 2009. The gastrointestinal microbiome: a malleable third genome in mammals. Mammalian Genome 20: 395-403.

Uronis JM, Threadgill DW. 2009. Murine models of colorectal cancer. Mammalian Genome 20:261-268 (Cover Figure).

Halladay A, Amaral D, Aschner M, Bolivar V, Bowman A, DiCicco-Bloom E, Hyman S, Keller F, Lein P, Pessah I, Restifo L, Threadgill DW. 2009. Animal models of autism spectrum disorders: information for neurotoxicologists. Neurotoxicology 30:811-821.

Fiske WH, Threadgill DW, Coffey RJ. 2009. ERBBs in the gastrointestinal tract: recent progress and new perspectives. Experimental Cell Research 315:583-601.

Abate-Shen C, Brown PH, Colburn NH, Gerner EW, Green JE, Lipkin M, Nelson WG, Threadgill DW. 2008. The untapped potential of genetically-engineered mouse models in chemoprevention research: opportunities and challenges. Cancer Prevention Research 1:161-166.

Threadgill DW. 2008. Down's Syndrome: the paradox of a tumor repressor (News and Views). Nature 452:21-22.

Radiloff D, Rinella E, Threadgill DW. 2008. Modeling cancer patient populations in mice: complex genetics and environmental factors. Drug Discovery Today: Disease Models 4:83-88.

Threadgill DW. 2006. Meeting report for the 4th annual complex trait consortium meeting: from QTLs to systems genetics. Mammalian Genome 17:2-4.

Threadgill DW. 2006. 'The collaborative cross: a unique mouse model resources for multi-variant QTL analysis of agriculturally important traits' in Valente BD, de Morais OR and Ventura RV (organizers), Proceedings of the 8th World Congress on Genetics Applied to Livestock Production, Belo Horizonte, Brazil.

Threadgill DW. 2005. Metastatic potential as a heritable trait (News and Views). Nature Genetics 37:1026-1027.

Churchill GA, Airey DC, Allayee H, Angel JM, Attie AD, Beatty J, Beavis WD, Belknap JK, Bennett B, Berrenttini W, Bleich A, Bogue M, Broman KW, Buck KJ, Buckler E, Burmeister M, Chesler EJ, Cheverud JM, Clapcote S, Cook MN, Cox RD, Crabbe JC, Crusio WE, Darvasi A, Deschnepper

CF, Doerge RW, Faber CR, Forejt J, Gaile D, Garlw SJ, Geiger H, Gershenfeld H, Gordon T, Gu J, Gu WK, de Hann G, hayes NL, Heller C, Himmelbauer H, Hitzemann R, Hunter K, Hsu HC, Iraqi FA, Ivandic B, Jacob HJ, Jansen RC, Jjepsen KJ, Johnson DK, Johnson TE, Kempermann G, Kendziorski C, Kotb M, Kooy RF, Llamas B, Lammert F, Lassalle JM, Lowenstein PR, Lu L, Lusiss A, Manly KF, Marcucio R, Matthews D, Medrano JF, Miller DR, Mittleman G, Mock BA, Modil JS, Montagutelli X, Morahan G, Morris DG, Mott R, Nadeau JH, Nagase H, Nowakowski RS, O'Hara BF, Osadchuk AV, Page GP, Paigen B, Paigen K, Palmer AA, Qi ZH, Reeves RH, Roder J, Rosen GD, Schadt EE, Schalkwyk LC, Seltzer Z, Shimomure K, Shou SM, Sillanpaa MJ, Siracusa LD, Snoeck HW, Spearow JL, Svenson K, Tarantino LM, Threadgill DW, Toth LA, Valdar W, de Villena FPM, Warden C, Whatley S, Williams RW, Wiltshire T, Yi NJ, Zhang DB, Zhang M, Zou F. 2004. The Collaborative Cross, a community resource for the genetic analysis of complex traits. Nature Genetics 36:1133-1137.

Lee D, Threadgill DW. 2004. Investigating gene function using mouse models. Current Opinion in Genetics and Development 14:246-252.

Roberts RB, Arteaga CL, Threadgill DW. 2004. Modeling the entire patient: predicting side-effects of targeted therapies with the genetically engineered mouse. Cancer Cell 5:115-120.

Abiola O, Angel JM, Avner P, Bachmanov AA, Belknap JK, Bennett B, Blankenhorn EP, Blizard DA, Bolivar V, Brockmann GA, Buck KJ, Bureau JF, Casley WL, Chesler EJ, Cheverud JM, Churchill GA, Cook M, Crabbe JC, Crusio WE, Darvasi A, de Haan G, Dermant P, Doerge RW, Elliot RW, Farber CR, Flaherty L, Flint J, Gershenfeld H, Gibson JP, Gu J, Gu W, Himmelbauer H, Hitzemann R, Hsu HC, Hunter K, Iraqi FF, Jansen RC, Johnson TE, Jones BC, Kempermann G, Lammert F, Lu L, Manly KF, Matthews DB, Medrano JF, Mehrabian M, Mittlemann G, Mock BA, Mogil JS, Montagutelli X, Morahan G, Mountz JD, Nagase H, Nowakowski RS, O'Hara BF, Osadchuk AV, Paigen B, Palmer AA, Peirce JL, Pomp D, Rosemann M, Rosen GD, Schalkwyk LC, Seltzer Z, Settle S, Shimomura K, Shou S, Sikela JM, Siracusa LD, Spearow JL, Teuscher C, Threadgill DW, Toth LA, Toye AA, Vadasz C, Van Zant G, Wakeland E, Williams RW, Zhang HG, Zou F. 2003. The nature and identification of quantitative trait loci: a community's view. Nature Reviews Genetics 4:911-916.

Williams RW, Flaherty L, Threadgill DW. 2003. The math of making mutant mice. Genes, Brain and Behavior 2:191-200.

Williams RW, Broman KW, Cheverud JM, Churchill GA, Hitzemann RW, Hunter KW, Mountz JD, Pomp P, Reeves RH, Schalkwyk LC, Threadgill DW. 2002. A collaborative cross for high-precision complex trait analysis: workshop report of the Collaborative Cross planning committee. http://www.complextrait.org/workshop1.pdf

Threadgill DW, Hunter KW, and Williams RW. 2002. Genetic dissection of complex and quantitative traits: from fantasy to reality via a community effort. Mammalian Genome 13:175-178.

Coffey RJ, Threadgill DW. 2000. Microarray foray. Breast Cancer Research 2:8-9.

Threadgill DW, Yee D, Thompson C, Magnuson T. 1995. Epidermal growth factor receptor deficiency results in periimplantation lethality in mouse. Proceedings of the Serono Symposium on Molecular and Cellular Aspects of Periimplantation Processes, 231-235.

Peer-reviewed research articles

DeSimone MC, Rathmell WK, Threadgill DW. 2013. Pleiotropic effects of the trichloroethylene-associated P81S VHL mutation on metabolism, apoptosis and ATM-mediated DNA damage response. Journal of the National Cancer Institute, in press.

Neufert C, Becker C, Tureci O, Waldner MJ, Backert I, Floh K, Atreya I, Leppkes M, Jefremow A, Vieth M, Schneider-Stock R, Klinger P, Greten F, Threadgill DW, Sahin U, Neurath MF. 2013. Tumor fibroblast-derived epiregulin promotes growth of colitis-associated neoplasms through ERK. Journal Clinical Investigation 123:1428-1443.

Ferris MT, Aylor DL, Bottomly D, Whitmore AC, Aicher LD, Bell TA, Bradel-Tretheway B, Bryan JT, Buus RJ, Gralinski LE, Haagmans BL, McMillan L, Miller DR, Rosenzweig E, Valdar W, Wang J, Churchill GA, Threadgill DW, McWeeney SK, Katze MG, de Villena FPM, Baric RS, Heise MT. 2013. Modeling host genetic regulation of influenza pathogenesis in the Collaborative Cross. PLoS Pathogens 9:e1003196.

Saito K, Horiuchi K, Kimura T, Mizuno S, Yoda M, Morioka H, Akiyama H, Threadgill DW, Okada Y, Toyama Y, Sato K. 2013. Conditional inactivation of TNFα-converting enzyme in chondrocytes results in an elongated growth plate and shorter long bones. PLoS ONE 8:e54853.

Eversley CD, Xie Y, Pearsall RS, Threadgill DW. 2012. Mapping five new Susceptibility to Colon Cancer (Scc) loci using a mouse inter-specific backcross. G3: Genes, Genomes and Genetics 2:1577-1584.

Mustafi R, Dougherty U, Shah H, Dehghan H, Gliksberg A, Wu J, Zhu H, Joseph L, Hart J, Dive C, Fichera A, Threadgill DW, Bissonnette M. 2012. Both stromal cell and colonocyte epidermal growth factor receptors control HCT116 colon cancer cell growth in tumor xenografts. Carcinogenesis 33:1930-1939.

Ardito CA, Grüner BM; Takeuchi KK, Lubeseder-Martellato C, Teichmann N, Mazur PK, DelGiorno KE, Halbrook CJ, Carpenter ES, Hall JC, Pal D, Briel T, Herner A, Trajkovic-Arsic M, Sipos B, Liou G-Y, Storz P, Murray NR, Threadgill DW, Sibilia M, Washington MK, Wilson CL, Schmid RM, Raines EW, Crawford HC and Siveke JT. 2012. EGF Receptor is required for KRAS-induced Pancreatic Tumorigenesis. Cancer Cell 22:304-317.

Rinella ES, Threadgill DW. 2012. Efficacy of EGFR inhibition is modulated by model, sex, genetic background and diet: implications for preclinical cancer prevention and therapy trials. PLoS ONE 7:e39552.

Franzke CW, Cobzaru C, Triantafyllopoulou A, Loeffek S, Horiuchi K, Threadgill DW, Kurz T, van Rooijen N, Bruckner-Tuderman L, Blobel CP. 2012. Epidermal ADAM17 maintains skin barrier by regulating EGFR ligand-dependent terminal keratinocyte differentiation. Journal of Experimental Medicine 209:1105-1119.

Crowley JJ, Kim Y, Szatkiewicz JP, Pratt AL, Quackenbush CR, Adkins DE, van den Oord E, Bogue MA, Yang H, Churchill G, Wang W, Threadgill DW, de Villena FPM, McLeod HL, Sullivan PF. 2012. Genome-wide association mapping of loci for antipsychotic-induced extrapyramidal symptoms in mice. Mammalian Genome 23:322-335.

Rinella ES, Bankaitis ED, Threadgill DW. 2012. Dietary calcium supplementation enhances efficacy but also toxicity of EGFR inhibitor therapy for colon cancer. Cancer Biology and Therapy 13:130-137.

Chen J, Chen JK, Nagai K, Plieth D, Tan M, Lee TC, Threadgill DW, Neilson EG, Harris RC. 2012. EGFR signaling promotes TGFβ-dependent renal fibrosis. Journal of the American Society of Nephrology 23:215-224.

Kelada SNP, Aylor DL, Peck B, Tavarez U, Buus R, Miller DR, Chesler E, Threadgill DW, Churchill GA, de Villena FPM, Collins FS. 2012. Identification of QTL for hematological parameters in developing lines of the collaborative cross. G3: Genes, Genomes and Genetics 2:157-165 (Cover Figure).

Iraqi FA, Mahajne M, Salaymah Y, Didion JP, Fu C-P, Gooch TJ, Hansen SD, McMillan L, Manly KF, Miller DR, de Villena FP-M, Shaw GD, Spence JS, Threadgill DW, Wang J, Welsh CE, Morahan G, Balmer L, Pettit K, Hall M and The Collaborative Cross Consortium. 2012. The genome architecture of the collaborative cross mouse genetic reference population. Genetics 190:389-401 (Cover Figure).

Bottomly D, Ferris MT, Aicher LD, Rosenzweig E, Whitmore A, Aylor DL, Haagmans BL, Gralinski LE, Bradel-Tretheway BG, Bryan JT, Threadgill DW, de Villena FP-M, Baric RS, Katze MG, Heise M, McWeeney SK. 2012. Expression quantitative trait loci for extreme host response to influenza A in pre-Collaborative Cross mice. G3: Genes, Genomes and Genetics 2:213-221.

Bollée G, Flamant M, Schordan S, Fligny C, Rumpel E, Milon M, Schordan E, Sabaa N, Vandermeersch S, Galaup A, Rodenas A, Casal I, Sunnarborg SW, Salant DJ, Kopp JB, Threadgill DW, Quaggin SE, Dussaule JC, Germain S, Mesnard L, Endlich K, Bouchiex C, Bellenfant X, Callard P, Endlich N, Tharaux PL. 2011. Epidermal growth factor receptor promotes glomerular injury and renal failure in rapidly progressive crescentic glomerulonephritis. Nature Medicine 17:1242-1250.

Gatti DM, Lu L, Williams RW, Sun W, Wright FA, Threadgill DW, Rusyn I. 2011. MicroRNA expression in the livers of inbred mice. Mutation Research 714:126-133.

Mathes WF, Aylor DL, Miller DR, Churchill GA, Chesler EJ, Pardo Manuel de Villena F, Threadgill DW, Pomp D. 2011. Architecture of energy balance traits in emerging lines of the Collaborative Cross. American Journal of Physiology - Endocrinology and Metabolism 300:E1124-1134.

Zhang X, Tamasi J, Lu X, Zhu J, Chen H, Tian X, Lee T, Threadgill DW, Kream BE, Kang Y, Partridge NC, Qin L. 2011. Epidermal growth factor receptor plays an anabolic role in bone metabolism in vivo. Journal of Bone Mineral Research 26:1022-1034.

Kim K, Lee H, Threadgill DW, Lee DK. 2011. Epiregulin-dependent amphiregulin expression and ERBB2 signaling are involved in luteinizing hormone-induced paracrine signaling pathways in mouse ovary. Biochem Biophys Res Comm 405: 319-324.

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, Calaway JD, 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 DW, de Villena FP-M, Churchill GA. 2011. Genetic analysis of complex traits in the emerging collaborative cross. Genome Research 21:1213-1222.

Bradford BU, Lock EF, Kosyk O, Kim S, Uehara T, Harbourt D, DeSimone M, Threadgill DW, Tryndyak V, Pogribny IP, Bleyle L, Koop DR, Rusyn I. 2011. Inter-strain differences in the liver effects of trichloroethylene in a multi-strain panel of inbred mice. Toxicological Sciences 120: 206-217.

Eversley CD, Clark T, Xie Y, Steigerwalt J, Bell TA, de Villena FP, Threadgill DW. 2010. Genetic mapping and developmental timing of transmission ratio distortion in a mouse interspecific backcross. BMC Genetics 11:98-103.

Gordon RR, LaMerrill L, Hunter KW, Sorensen P, Threadgill DW, Pomp D. 2010. Dietary fat-dependent transcriptional architecture and copy number alterations associated with modifiers of mammary cancer metastasis. Clinical and Experimental Metastasis 27:279-293.

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LaMerrill MA, Harper R, Birnbaum LS, Cardiff RD, Threadgill DW. 2010. Maternal dioxin exposure combined with a diet high in fat increases mammary cancer incidence. Environmental Health Perspectives 118:596-601.

LaMerrill MA, Gordon RR, Hunter KW, Threadgill DW, Pomp D. 2010. Dietary fat alters pulmonary metastasis of mammary cancers through cancer autonomous and non-autonomous changes in gene expression. Clinical and Experimental Metastasis 27:107-116.

Zhang Z, Pascuet E, Hueber PA, Chu L, Bichet DG, Lee TC, Threadgill DW, Goodyer P. 2010. Targeted inactivation of EGF receptor inhibits renal collecting duct development and function. Journal American Society of Nephrology 21:573-578.

Mascia F, Cataisson C, Lee TC, Threadgill DW, Mariani V, Amerio P, Chandrasekhara C, Souto Adeva G, Girolomoni G, Yuspa SH, Pastore S. 2010. EGFR regulates the expression of keratinocyte derived granulocyte/macrophage colony-stimulating factor in vitro and in vivo. Journal of Investigative Dermatology 130:682-693.

Dougherty U, Cerasi D, Taylor I, Kocherginsky M, Tekin U, Badal S, Aluri L, Sehdev A, Cerda S, Mustafi R, Delgado J, Joseph L, Zhu H, Hart J, Threadgill DW, Fichera A, Bissonnette M. 2009. Epidermal growth factor receptor is required for colonic tumor promotion by dietary fat in the azoxymethane/dextran sulfate sodium model: roles of transforming growth factor-alpha and PTGS2. Clinical Cancer Research 15:6780-6789 (Cover Figure).

Munger SC, Aylor DL, Syed HA, Magwene PM, Threadgill DW, Capel B. 2009. Systems genetic analysis reveals key nodes in the transcription network governing sex determination in mammals. Genes and Development 23:2521-2536.

Gatti DM, Harrill AH, Wright FA, Threadgill DW, Rusyn I. 2009. Replication and narrowing of gene expression quantitative trait loci using inbred mice. Mammalian Genome 20:437-446.

Lee DK, Yu M, Lee E, Kim H, Yang Y, Paniccia C, Kim K, Kurie JM, Threadgill DW. 2009. Tumor-specific apoptosis caused by deletion of the ERBB3 pseudo-kinase in the intestinal epithelium. Journal Clinical Investigation 119:2702-2713.

Barrick CJ, Dong A, Waikel R, Corn D, Yang F, Threadgill DW, Smyth SS. 2009. Parent-of-origin effects on cardiac response to pressure overload in mice. Am J Physiol-Heart and Circulation 297:H1003-1009.

Dackor J, Caron KM, Threadgill DW. 2009. Placental and embryonic growth restriction in mice with reduced function epidermal growth factor receptor alleles. Genetics 183:207-218.

Barrick CJ, Roberts RB, Rojas M, Rajamannan NM, Suitt CB, O'Brien KD, Smyth SS, Threadgill DW. 2009. Reduced EGFR causes abnormal valvular differentiation leading to calcific aortic stenosis and left ventricular hypertrophy in C57BL/6J but not 129S1/SvImJ mice. Am J Physiol-Heart and Circulation 297:H65-75.

Harrill AH, Ross PK, Threadgill DW, Rusyn I. 2009. Population-based discovery of toxicogenomics biomarkers for hepatotoxicity using a laboratory strain diversity panel. Toxicological Sciences 110:235-243.

LaMerrill MA, Kurvilla BS, Pomp D, Birnbaum LS, Threadgill DW. 2009. Dietary fat alters body composition, mammary development and P450 induction following maternal TCDD exposure in DBA/2J mice that express low responsive aryl hydrocarbon receptors. Environmental Health Perspectives 117:1414-1419.

Dackor J, Li M, Threadgill DW. 2009. Placental overgrowth and fertility defects in mice with a hypermorphic allele of epidermal growth factor receptor. Mammalian Genome 20:339-349 (Cover Figure).

Moy SS, Ghashghaei HT, Nonneman RJ, Weimer JM, Yokota Y, Lee D, Lai C, Threadgill DW, Anton ES. 2009. Deficient NRG1-ERBB signaling alters social approach: relevance to genetic mouse models of schizophrenia. Journal of Neurodevelopmental Disorders 1:302-312.

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Harrill AH, Watkins PB, Su S, Ross PK, Harbourt DE, Stylianou IM, Boorman GA, Russo MW, Sackler RS, Harris SC, Smith PC, Tennant R, Bogue M, Paigen K, Harris C, Contractor T, Wiltshire T, Rusyn I, Threadgill DW. 2009. Mouse population-guided resequencing reveals that variants in CD44 contribute to acetaminophen-induced liver injury in humans. Genome Research 19:1507-1515.

LaMerrill M, Baston DS, Denison MS, Birnbaum LS, Pomp D, Threadgill DW. 2009. Mouse breast cancer model-dependent changes in metabolic syndrome-associated phenotypes caused by maternal dioxin exposure and dietary fat. Am J Physiol-Endocrinology and Metabolism 296:E203-210.

Lee T-C, Threadgill DW. 2009. Generation and validation of mice carrying a conditional allele of the epidermal growth factor receptor. Genesis 47:85-92.

Zhang Q, Wang W, McMillan L, Pardo-Manuel de Villena F, Threadgill DW. 2009. Inferring genome-wide mosaic structure. Proceedings of the 14th Pacific Symposium on Biocomputing (PSB) 2009:150-161.

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Chesler EJ, Miller DR, Branstetter LR, Galloway L, Jackson BL, Philip VM, Voy BH, Culiat CT, Threadgill DW, Williams RW, Churchill GA, Johnson DK, Manly KF. 2008. The Collaborative Cross at Oak Ridge National Laboratory: developing a powerful resource for systems genetics. Mammalian Genome 19:382-389 (Cover Figure).

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Uronis JM, Herfarth HH, Rubinas TC, Bissahoyo AC, Hanlon K, Threadgill DW. 2007. Flat colorectal cancers are genetically determined and progress to invasive cancer without going through a polypoid stage. Cancer Research 67:11594-11600 (Cover Figure).

Dackor J, Strunk KE, Wehmeyer MM, Threadgill DW. 2007. Altered trophoblast proliferation is insufficient to cause placental dysfunction in Egfr null embryos. Placenta 28:1211-1218.

Roberts A, Pardo-Manuel de Villena F, Wang W, McMillan L, Threadgill DW. 2007. The polymorphism architecture of mouse genetic resources elucidated using genome-wide resequencing data: implications for QTL discovery and systems genetics. Mammalian Genome 18:473-481.

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Submitted manuscripts

Syed HA, McConnell LB, Threadgill DW. Inter-strain variation in colonic gene expression is associated with differential cancer susceptibility in mice.

Alexander AD, Orcutt R, Bissshoyo AC, Hanlon K, Threadgill DW. Commensal flora and the development of AOM-induced colon cancer.

Bissahoyo AC, Xie Y, Yang L, Pearsall RS, Godfrey V, Elliott RW, Demant P, Wang W, McMillan L, de Villena FPM, Threadgill DW. Genetic architecture and phenotypic heterogeneity of the azoxymethane mouse model of non-familial colorectal cancer.

Biggs MB, Lee TC, Threadgill DW. EGFR signaling in adipocytes is required to regulate normal body growth through IGF1 but not for adipose deposition.

Ma F, Aylor DL, Mathes W, Legge R, Kim J, Walter J, Bell TA, Hua K, de Villena FPM, Threadgill DW, Pomp D, Benson AK. Host genetic architecture in the emerging Collaborative Cross mouse genetic reference population controls collective groups of microbial taxa and individual species that influence assembly into enterotype-like configurations.

Song X, Fan PD, Guha U, Threadgill DW, Varmus H, Politi K. The epidermal growth factor receptor heterodimerization partner ERBB3 is not required for tumorigenesis by lung cancer-associated EGFR mutants.

Bautz DJ, Broman KW, Threadgill DW. Identification of a novel polymorphism in X-linked sterol-4-alpha-carboxylate 3-dehydrogenase (*Nsdhl*) associated with reduced HDL cholesterol levels in I/LnJ mice.

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Crowley JJ, Zhabotynsky V, Sun W, Huang S, Pakatci IK, Kim Y, Wang JR, Morgan AP, Calaway JD, Aylor DL, Yun Z, Bell TA, Buus RJ, Calaway ME, Didion JP, Gooch TJ, Hansen SD, Robinson NN, Shaw GD, Spence JS, Quackenbush CR, Barrick CJ, Xie Y, Valdar W, Lenarcic AB, Wang W, Welsh CE, Fu CP, Zhang Z, Holt J, Guo Z, Threadgill DW, Tarantino LM, Miller DR, Zou F, McMillan L, Sullivan PF, Pardo-Manuel de Villena F. Pervasive allelic imbalance revealed by allele-specific gene expression in highly divergent mouse crosses.

Song X, Fan PD, Guha U, Threadgill DW, Varmus H, Politi K. ERBB3 independent activation of the PI3K pathway in EGFR mutant lung adenocarcinomas.

Teaching

Course director

ALS 398H: Planet of the Rodents: invasive pests and their impact on human and environmental health (2 credit hours; 12 students), NCSU, 2013

GN 441/541: Human and Biomedical Genetics (3 credit hours; 26 students), NCSU, 2012

Workshop on Techniques in Modeling Human Cancer in Mice (6 days lecture/lab; 16 students), Jackson Laboratory, 2012

ALS 398H: Genetic Ethics (2 credit hours; 16 students), NCSU, 2012

GN 441/541: Human and Biomedical Genetics (3 credit hours; 15 students), NCSU, 2011

GN 441/541: Human and Biomedical Genetics (3 credit hours; 14 students), NCSU, 2011

Techniques for Modeling Human Colon Cancer in Mice (4 days lecture/lab; 16 students), Jackson Laboratory, 2010

GN 810: Mammalian Genetics (2 credit hours; 11 students), NCSU, 2009

Techniques for Modeling Human Colon Cancer in Mice (4 days lecture/lab; 16 students), Jackson Laboratory, 2009
GNET 675, Computational Genetics (2 credit hours; 6 students), UNC, 2007-2008
26th Annual Molecular Embryology of the Mouse (20 days lecture/lab; 14 students), Director, Cold Spring Harbor Laboratory, 2008
16th Experimental Genetics of the Laboratory Mouse in Cancer Research (14 days lecture; 25 students), Co-director, Jackson Laboratory, 2007
25th Annual Molecular Embryology of the Mouse (20 days lecture/lab; 14 students), Director, Cold Spring Harbor Laboratory, 2007
15th Experimental Genetics of the Laboratory Mouse in Cancer Research (14 days lecture; 25 students), Co-director, Jackson Laboratory, 2006
24th Annual Molecular Embryology of the Mouse (20 days lecture/lab; 14 students), Assistant Director, Cold Spring Harbor Laboratory, 2006
14th Experimental Genetics of the Laboratory Mouse in Cancer Research (14 days lecture; 25 students), Co-director, Jackson Laboratory, 2005
23rd Annual Molecular Embryology of the Mouse (20 days lecture/lab; 14 students), Assistant Director, Cold Spring Harbor Laboratory, 2005
13th Experimental Genetics of the Laboratory Mouse in Cancer Research (14 days lecture; 25 students), Co-director, Jackson Laboratory, 2004
Techniques for Modeling Human Colon Cancer in Mice (3 days lecture/lab; 16 students), Co-director, Jackson Laboratory, 2004
CBIO 341, Developmental Biology (3 credit hours; 12 students), Vanderbilt, 1999
CBIO 310, Seminar Survey (1 credit hour; 15 students), Vanderbilt, 1998
CBIO 310, Seminar Survey (1 credit hour; 15 students), Vanderbilt, 1997
GENE 301, Genetics Laboratory (3 sections of 1 credit hour lab), Texas A&M University, 1984

Lecturer
TOXC 442, Molecular Toxicology (1 lecture hour), UNC, 2012
30th Annual Mouse Development, Stem Cells and Cancer (4 lecture hours), Cold Spring Harbor Laboratory, 2012
GN 820, Professional Development (2 lecture hours), NCSU, 2012
CBS 800, Research Seminar (1 lecture hour), NCSU, 2011
TOXC 442, Molecular Toxicology (1 lecture hour), UNC, 2011
GN 415, Genome Science (1 lecture hour), NCSU, 2011
TOXC 442, Molecular Toxicology (1 lecture hour), UNC, 2010
GN 415, Genome Science (1 lecture hour), NCSU, 2010
19th Annual Short Course on Experimental Models of Human Cancer (1 lecture hour), Jackson Laboratory, 2010
28th Annual Molecular Embryology of the Mouse (3 lecture hours), Cold Spring Harbor Laboratory, 2010
GN 415, Genome Science (1 lecture hour), NCSU, 2009
TOXC 442, Molecular Toxicology (1 lecture hour), UNC, 2009
18th Annual Short Course on Experimental Models of Human Cancer (1 lecture hour), Jackson Laboratory, 2009
27th Annual Molecular Embryology of the Mouse (2 lecture hours), Cold Spring Harbor Laboratory, 2009
BIOL 423L, Laboratory Experiments in Genetics (1 lecture hour), UNC, 2008
PATH 725, Cancer Pathobiology (1 lecture hour), UNC, 2008
TOXC 442, Molecular Toxicology (1 lecture hour), UNC, 2008

17th Annual Short Course on Experimental Models of Human Cancer (1 lecture hour), Jackson Laboratory, 2008
BIOL 5120, Genetics (1 lecture hour), North Carolina Central University, 2008
BIOL 423L, Laboratory Experiments in Genetics (1 lecture hour), UNC, 2007
MEDI MS1, First year medical curriculum, Molecules to Cells (2 lecture hours), UNC, 2007
NUTR 860, Adv. Nutritional Biochemistry, Genetics and Genomics (2 lecture hours), UNC, 2007
TOXC 442, Molecular Toxicology (1 lecture hour), UNC, 2007
PATH 725, Cancer Pathobiology (1 lecture hour), UNC, 2007
BIOL 5120, Genetics (1 lecture hour), North Carolina Central University, 2007
MEDI MS1, First year medical curriculum, Molecules to Cells (3 lecture hours), UNC, 2006
NUTR 860, Adv. Nutritional Biochemistry, Genetics and Genomics (1 lecture hour), UNC, 2006
TOXC 142, Molecular Toxicology (1 lecture hour), UNC, 2006
PATH 225, Cancer Pathobiology (1 lecture hour), UNC, 2006
BIOL 5120, Genetics (1 lecture hour), North Carolina Central University, 2006
MEDI 135, First year medical curriculum, Genetics and Molecular Biology (3 lecture hours), UNC, 2005
PATH 225, Cancer Pathobiology (1 lecture hour), UNC, 2005
TOXC 142, Molecular Toxicology (1 lecture hour), UNC, 2005
MEDI 135, First year medical curriculum, Genetics and Molecular Biology (4 lecture hours), UNC, 2004
22nd Annual Molecular Embryology of the Mouse (3 lecture hours), Cold Spring Harbor Laboratory, 2004
PATH 225, Cancer Pathobiology (1 lecture hour), UNC, 2004
TOXC 142, Molecular Toxicology (1 lecture hour), UNC, 2004
BIOL 5120, Genetics (2 lecture hours), North Carolina Central University, 2004
MEDI 135, First year medical curriculum, Genetics and Molecular Biology (4 lecture hours), UNC, 2003
PATH 225, Cancer Pathobiology (1 lecture hour), UNC, 2003
TOXC 142, Molecular Toxicology (1 lecture hour), UNC, 2003
BIOL 5120, Genetics (2 lecture hours), North Carolina Central University, 2003
12th Annual Experimental Genetics of the Laboratory Mouse in Cancer Research (2 lecture hours), Jackson Laboratory, 2003
21st Annual Molecular Embryology of the Mouse (3 lecture hours), Cold Spring Harbor Laboratory, 2003
MEDI 135, First year medical curriculum, Genetics and Molecular Biology (5 lecture hours), UNC, 2002
PATH 225, Cancer Pathobiology (1 lecture hour), UNC, 2002
GNET 111, Adv Mol Biol II (3 lecture hours), UNC, 2002
CBIO 118, Cell Signaling and Growth Control (1 lecture hour), UNC, 2002
11th Annual Experimental Genetics of the Laboratory Mouse in Cancer Research (2 lecture hours), Jackson Laboratory, 2002
GNET 111, Adv Mol Biol II (1 lecture hour), UNC, 2001
PATH 225, Cancer Pathobiology (1 lecture hour), UNC, 2001
10th Annual Experimental Genetics of the Laboratory Mouse in Cancer Research (2 lecture hours), Jackson Laboratory, 2001
IGP, Mouse Genetics (4 lecture hours), Vanderbilt, 1999
IGP, Mouse Genetics (1 lecture hour), Vanderbilt, 1998
IGP, Mouse Genetics (5 lecture hours), Vanderbilt, 1997
IGP, Mouse Genetics (5 lecture hours), Vanderbilt, 1996

Mentorship

Undergraduate students
Kate Owens (Chemistry, NCSU), 2013-present
Jasper Schulte (Humboldt-Universität zu Berlin, Germany), Internship exchange, 2012-2013
Haley Crockett (University of Surrey, UK), Internship exchange, 2012-2013
Kelsey Parrish (Biology, NCSU), 2012-present
Courtney Vaughn (Biology, NCSU), 2012-present
Joshua Quinn (Biology, NCSU), 2012-present
Morgan McCafferty (Animal Science NCSU), 2012-present
Jennifer Gredler (Biology, NCSU), 2012-present
Jennifer Baker (Biology, NCSU), 2012
Ang Sherpa (University of Surrey, UK), Internship exchange, 2011-2012
Lindsay Speir (Biology, NCSU), 2011-2012
Hope Hendricks (Biology, NCSU), 2011-present
Hanna Gardner (Animal Science, NCSU), 2011-2012
Emma Friberg (Biology NCSU), 2011-2012, CALS Honors: "Modeling human diseases in mice: effects of trichloroethylene and inorganic arsenic"
Kara Peterson (Biology, NCSU), 2011-2012
Victoria Ramos (Biology, NCSU), 2011-present
Keiko Wadsworth (Microbiology, NCSU), 2010-present, CALS Honors: "Environmental carcinogen-induced retinal degeneration in a population-based mouse model"
Madison Pace (Biology, NCSU), 2011
Megan Morse (Nutrition, NCSU), 2010-2012, CALS Honors: "Correlation between genotype and mouse limb length"
Amanda Gross (Animal Science, NCSU), 2011-present
Molly Matty (Chemistry, NCSU), 2011-2012, Recipient of an NSF Predoctoral Research Fellowship as a senior, NCSU Honors: "Development of an assay to determine telomere length using real time PCR of *Mus musculus* embryonic fibroblasts as compared to a single copy gene, epidermal growth factor receptor"
Kritika Joshi (Biology, NCSU), 2011, CALS Honors: "Modeling Parkinson's Disease in mice with trichloroethylene and inorganic arsenic"
Anna Knight (Biology, NCSU), 2010-present
Kimberly Wagner (Biochemistry, NCSU), 2010-2011
Garrison Glavich (Microbiology, NCSU), 2010-2011
Alan Bohn (Microbiology, NCSU), 2010-2012
Becky Brulet (Zoology, NCSU), 2010-2011
Tara Buff (Biology, NCSU), 2010-2011
Angela Kashap (Biology, NCSU), 2009-2010, CALS Honors: "Pre-clinical detection of risk factors for idiosyncratic drug-induced liver injury"
Everett Warren (Biochemistry, NCSU), 2009-2010, CALS Honors: "A comparative study of blastocyst implantation in three strains of mice: C3H, 129, and B6"
Ben Rusche (Microbiology, NCSU), 2009-2010
Katie Caviness (Animal Science, NCSU), 2009-2010
Rachel Harper (Biology, UNC), 2007-2009, Biology Honors (Highest) and selected presenter for the 9th Annual UNC Celebration of Undergraduate Research: "Dietary fat and dioxin exposure increase mammary cancer incidence through Cyp1b1 and Comt expression"
Patrick Summers (Biology, UNC), 2007-2008
Jennifer Zeng (Biology, UNC), 2007-2008
Brent Chen (Biology, UNC), 2007-2008

Tavia Clark (Biology, UNC), 2007-2008
Richard Frye (Biology, UNC), 2006-2008, Biology Honors: "Characterization of epidermal growth factor receptor independent colorectal tumors in the Apc^{Min} mouse model"
Dawn Hrelic (Biology, UNC), 2006-2007
Anne Dvorak (Biology, UNC), 2006-2007
Drew Corn (Biology, UNC), 2006-2007
Adam Corn (Biology, UNC), 2005-2007
Holly Love (Biology, UNC), 2005-2006
Jessica Heinz (Biology, UNC), 2005-2006
Joi Weeks (Chemistry, UNC), 2005-2006
Bittu Kurvilla (Chemistry, UNC), 2005-2006, Chemistry Honors: "Effects of aromatic hydrocarbons on mammary gland cancer"
Eric Bankaitis (Biology, UNC), 2005-2006, Biology Honors: "The combined effects of dietary supplementation and molecular-targeted therapy on colon cancer cell proliferation in vitro"
Aline Alexanian (Biology, UNC), 2005-2006
Christina Paniccia (Biology, UNC), 2004-2006, Recipient of a 2005-2006 AACR-Thomas J. Bardos Science Education Award
Lindsay McConnell (Biology, UNC), 2004-2005
Carla Martin (Chemistry, UNC), 2004-2005
Katie Hanlon (Biology, UNC), 2004-2006, Recipient of a 2005-2006 AACR-Thomas J. Bardos Science Education Award
Natalie Hodges (Biology, UNC), 2003-2006
Liz Clore (Psychology, UNC), 2003-2005
Sha Syed (Chemistry, UNC), 2003-2004
Meera Shah (Biology, UNC), 2003-2005
Lori Leslie (Chemistry, UNC), 2004-2005, Chemistry Honors (Highest): "Induction of mitotic recombination for in vitro genetics"
Michael Haughton (Willamette University), 2003 UNC SURE Program
Rusty Mankinen (Biology, UNC), 2002-2003, Biology Honors: "Phenotypic analysis of the epidermal growth factor receptor mutation waved-2 on inbred genetic backgrounds"
Candice Bailey (Chemistry, UNC), 2001-2003, Chemistry Honors: "Biochemical analysis of the receptor encoded by the Wa5 mutation in Egfr"
Hal Wray (Biology, UNC), 2001-2002
Elisabeth Greer (University of Virginia), 2002 UNC SURE Program
Meggan Hovick (Biology, UNC), 2001-2003, Biology Honors: "Molecular and histological characterization of murine epidermal growth factor receptor null placentae"; Winner of the 2003 Department of Biology H.V.P. Wilson Award for excellence in research in cellular and molecular biology
Ben Wood (Biology, UNC), 2000-2003, Biology Honors: "Analysis of a carcinogen-based mouse model for hepatocarcinogenesis"
Robert Boykin (Biology, UNC), 2000-2002, Biology Honors: "Mouse strain-dependent differences in gastrointestinal morphology"
Tara Thompson (Biology, Vanderbilt), 1999-2000
Josh Parnum (Biology, Vanderbilt), 1999-2000
Amy Williams (Biology, Vanderbilt), 1998-2000
Allison Truell (Biology, Vanderbilt), 1997-1998
Vicky Wilkinson (Cambridge University, UK), Women in Science Vanderbilt Summer Undergraduate Program, 1997

Graduate students

Dona Kanavy (University of North Carolina, 2010), Genetics, NCSU, 2013-present
Shante Bryant (North Carolina State University, 2011), Genetics, NCSU, 2012-present
William Barrington (The College of Wooster, 2011), Genetics, NCSU, 2012-present
Tiffany Bernier (University of the Virgin Islands, 2010), Recipient of an NSF Predoctoral Research Fellowship, Genetics, NCSU, 2011-present
Megan Garlapow (University of Chicago, 2007), Genetics, NCSU, 2010-present
Michelle DeSimone (Northeastern University, 2003), Recipient of a Howard Hughes Med-into-Grad Scholar Fellowship and the SOT Syngenta Fellowship Award in Human Health Applications of New Technologies, 2007-2010, PhD in Toxicology, UNC: "In vitro and in vivo models to assess kidney toxicity of environmental carcinogens"
Yuying Xie (Fudan University, China, 2005), 2006-2012, PhD in Genetics and Molecular Biology, UNC:
Melanie Weed (Western New England College, 1998), 2006-2010, PhD in Toxicology, UNC: "The impact of epidermal growth factor receptor inhibition on energy homeostasis"
Ming Yu (Southern Yangtze University, China, 1997), Recipient of a WN Reynolds Fellowship, 2004-2007, PhD in Oral Biology, UNC: "The importance of ERBB receptor tyrosine kinase signaling in colorectal cancer: implications for EGFR-targeted therapies"
Chevonne Eversley (University of North Carolina, 2002), Recipient of an NIH Individual Predoctoral Research Fellowship, 2004-2009, PhD in Genetics and Molecular Biology, UNC: "Genetic and molecular analysis of colorectal cancer susceptibility"
Michele LaMerrill (Reed College, 2002), Recipient of a DOD Breast Cancer Pre-Doctoral Research Fellowship, 2004-2008, PhD in Toxicology, UNC: "Influence of diet and maternal dioxin on endocrine disruption: puberty, metabolic syndrome, and breast cancer"
Erica Rinella (Allegheny College, 1999), Recipient of an NIH Individual Predoctoral Research Fellowship, 2003-2008, PhD in Genetics and Molecular Biology, UNC: "Impact of diet on EGFR-targeted treatment of colorectal cancer"
Josh Uronis (State University of New York, Fredonia, 2002), 2003-2008, PhD in Genetics and Molecular Biology, UNC: "Histological and molecular analysis of colorectal cancer morphology"
Delia Barrick (University of North Carolina, 2000), 2003-2007, PhD in Toxicology, UNC: "Modeling the consequences of epidermal growth factor receptor inhibition on cardiac development, function and homeostasis"
Jennifer Clore Dackor (North Carolina State University, 2002), 2002-2008, PhD in Genetics and Molecular Biology, UNC: "Use of an allelic series in mice to study the role of epidermal growth factor receptor in placental development and pregnancy"
Tang-Cheng Lee (National Taiwan University, Taiwan, 1994), 1999-2007, PhD in Genetics and Molecular Biology, UNC: "Functional analysis of EGFR using a conditional allele"
Anika Bissahoyo (University of Maryland, 1998), Recipient of an NIH Individual Predoctoral Research Fellowship, 2001-2005, PhD in Toxicology, UNC: "Pathobiology of strain-specific responses to azoxymethane-induced colorectal cancer"
Reade Roberts (Susquehanna University, 1997), 1998-2003, PhD in Cell Biology, Vanderbilt: "Modeling the consequences of epidermal growth factor receptor inhibition in vivo using the classical $Egfr^{wa2}$ mutant mouse"
Karen Strunk (Lehigh University, 1993), 1997-2002, PhD in Cell Biology, Vanderbilt: "Genetic background modifiers of the epidermal growth factor receptor null phenotype"

Graduate student rotations
Dona Kanavy (Genetics, NCSU), 2013
Katherine Knudsen (Genetics, NCSU), 2012
Kate Coyle (Genetics, NCSU), 2012
Shante Bryant (Genetics, NCSU), 2011

Kelli Walters (Toxicology, NCSU), 2011
William Barrington (Genetics, NCSU), 2011
Tiffany Bernier (Genetics, NCSU), 2010
Mathew Robinson (Genetics, NCSU), 2010
Becky Edman (Genetics, NCSU), 2010
Megan Garlapow (Genetics, NCSU), 2009
Chris Sproul (Toxicology, UNC), 2008
Michelle DiSimone (Toxicology, UNC), 2007
Yuying Xie (Genetics and Molecular Biology, UNC), 2006
David Szabo (Toxicology, UNC), 2006
Melanie Weed (Toxicology, UNC), 2006
Ryan Gordon (Nutrition, UNC), 2006
Tracy Marion (Toxicology, UNC), 2005
Rachel Cote (Genetics and Molecular Biology, UNC), 2005
Hann-Hsiang Chao (MD/PhD Program, UNC), 2005
Kim Peterman (IBMS, UNC), 2005
Evan Merkhofer (Genetics and Molecular Biology, UNC), 2005
Harmony Salzler (Genetics and Molecular Biology, UNC), 2005
Ming Yu (Program in Oral Biology, UNC), 2004
Mitchell Troutman (Pathology and Laboratory Medicine, UNC), 2004
Chevonne Eversley (Genetics and Molecular Biology, UNC), 2003
Michele LaMerrill (Toxicology, UNC), 2003
Virginia Hench (IBMS, UNC), 2003
Erica Rinella (Genetics and Molecular Biology, UNC), 2003
Josh Uronis (Genetics and Molecular Biology, UNC), 2003
Delia Barrick (Toxicology, UNC), 2002
Tina Stevens (Toxicology, UNC), 2002
Heather Doherty (IBMS, UNC), 2002
Jennifer Clore (Genetics and Molecular Biology, UNC), 2002
Anika Bissahoyo (Toxicology, UNC), 2001
Andrew Lundquist (MD/PhD Program, Vanderbilt), 1999
Tang-Cheng Lee (IGP, Vanderbilt), 1999
Reade Roberts (IGP, Vanderbilt), 1998
Brett Everhart (IGP, Vanderbilt), 1998
Paul Speiser (IGP, Vanderbilt), 1997
Hakryul Jo (IGP, Vanderbilt), 1997
Karen Strunk (IGP, Vanderbilt), 1997

Graduate student committees
John Shorter, Mackay Lab (Genetics, NCSU)-current
Bhupinder Sehra, Franks Lab (Genetics, NCSU)-current
Randi Wheatley, Estes Lab (Genetics, NCSU)-current
Shilpa Swarup, Anholt Lab (Genetics, NCSU), PhD-2012
Sam Suarez, McCulloch Lab (Environmental and Molecular Toxicology, NCSU)-current
Huixuan Liang, Ghashghaei Lab (Physiology, NCSU)-current
Lisa McPhatter, Roberts Lab (Physiology, NCSU)-current
Catie Welsh, McMillan Lab (Computer Science, UNC)-current
Megan Koehler, Tzeng Lab (Statistics, NCSU), PhD-2011
Feng Pan, Wang Lab (Computer Science, UNC), PhD-2009
Lauren Walters, Southard-Smith Lab (Human Genetics, Vanderbilt), PhD-2010

Steven Munger, Capel Lab (Genetics and Genomics, Duke University), PhD-2010
Daniel Gatti, Rusyn Lab (Environmental Sciences and Engineering, UNC), PhD-2010
Xiang Zhang, Wang Lab (Computer Science, UNC), PhD-2011
Evan Merkhofer, Baldwin Lab (Genetics and Molecular Biology, UNC), PhD-2010
Victoria Newton, Lund Lab (Cell and Molecular Physiology, UNC), PhD-2010
Kim Petermann, Sharpless Lab (Genetics and Molecular Biology, UNC), PhD-2009
Samantha Segall, Wiltshire Lab (Genetics and Molecular Biology, UNC), PhD-2010
Caroline Lee, Rathmell Lab (Genetics and Molecular Biology, UNC), PhD-2009
Daniel Radiloff, Wang Lab (Pharmacology and Cancer Biology, Duke University), PhD-2009
Sally White, Fenton Lab (Toxicology, UNC), PhD-2008
Pam Ross, Rusyn Lab (Environmental Sciences and Engineering, UNC), MS-2008
Qi Zhang, Wang Lab (Computer Science, UNC), PhD-2009
Patrick Craig, Rusyn Lab (Environmental Sciences and Engineering, UNC), MS-2008
Myung Hee Lee, Marron Lab (Statistics and Operations Research, UNC), PhD-2007
Jonathan Gelfond, Ibrahim Lab (Biostatistics, UNC), PhD-2006
Christine Powel, Rusyn Lab (Toxicology, UNC), PhD-2007
Mark Schliekelman, Van Dyke Lab (Genetics and Molecular Biology, UNC), PhD-2008
Alison Hege, Rusyn Lab (Toxicology, UNC), PhD-2009
Nicole Ramocki, Lund Lab (Cell and Molecular Physiology, UNC), PhD-2008
Courtney Woods, Rusyn Lab (Toxicology, UNC), PhD-2007
Irene Baskerville, Swenberg Lab (Toxicology, UNC), PhD-2009
Jinze Liu, Wang Lab (Computer Science, UNC), PhD-2006
Michele Gauger, Sancar Lab (Biochemistry, UNC), PhD-2007
Alysia Kern Lovgren, Koller Lab (Genetics and Molecular Biology, UNC), PhD-2007
Jason Herschkowitz, Perou Lab (Genetics and Molecular Biology, UNC), PhD-2007
Heather Doherty, Maeda Lab (Genetics and Molecular Biology, UNC). PhD-2010
Folami Ideraabdullah, Pardo-Manuel Lab (Genetics and Molecular Biology, UNC), PhD-2007
Qian Zhang, Van Dyke Lab (Biochemistry, UNC), PhD-2006
Jessica Delbove, Weissman Lab (Pathology and Laboratory Medicine, UNC), PhD-2007
Zhe Zhang, Fenstermacher Lab (Biomedical Engineering, UNC), PhD-2005
Kelly Krock, Koller Lab (Genetics and Molecular Biology, UNC), PhD-2005
Yo-Chan Jeong, Swenberg Lab (Toxicology, UNC), PhD-2005
Scott Phillips, Bankaitis Lab (Cell and Development, UNC), PhD-2005
Reginald Hill, Van Dyke Lab (Genetics and Molecular Biology, UNC), PhD-2005
Sarah Owens, Southard-Smith Lab (Neuroscience, Vanderbilt), PhD-2005
Hannah Medford, Macdonald Lab (Biomedical Engineering, UNC), MS-2006
Tom Gebuhr, Magnuson Lab (Genetics and Molecular Biology, UNC), PhD-2003
Willie Wilson, Grant Lab (Biology, North Carolina Central University), MS-2003
Susan Hester, Wolf Lab (Pathology and Laboratory Medicine, UNC), PhD-2003
Michael Backlund, Koller Lab (Genetics and Molecular Biology, UNC), PhD-2003
Mark McQuain, Haselton Lab (Biomedical Engineering, Vanderbilt), PhD-2002
Dana Brantley, Kerr Lab (Cell Biology, Vanderbilt), PhD-2000
Ray Dunn, Hogan Lab (Cell Biology, Vanderbilt), PhD-1998

Postdoctoral scholars
Michelle DeSimone (University of North Carolina, 2011), 2011-present
Andrew Hillhouse (University of Missouri, 2010), 2010-present
Rachel Lynch (University of Tennessee, 2010), Recipient of an NIH Individual Postdoctoral Research Fellowship, 2010-present

Ryan Gordon (University of North Carolina, 2009), 2009-2010; Subsequent position: Research Associate, Fred Hutchinson Cancer Research Center
David Bautz (University of North Carolina, 2008), Recipient of an NIH Individual Postdoctoral Research Fellowship, 2008-present
Christine Powell (University of North Carolina, 2007), Recipient of The Leon and Bertha Goldberg Postdoctoral Fellowship and an NIH Individual Postdoctoral Research Fellowship, 2007-present
Elyse Lee (University of Wisconsin, 2005), SPIRE Postdoctoral Fellow, 2006-2009; Subsequent position: Assistant Professor, Mt. Olive College
Haider Ali Syed (Wageningen University, The Netherlands, 2001), 2003-2010; Subsequent position: Research Associate, North Carolina Central University
Deloris Alexander (Meharry Medical College, 2001), 2001-2005; Subsequent position: Assistant Professor, Tuskegee University
Daekee Lee (Seoul National University, Korea, 1993), 1998-2005; Subsequent position: Assistant Professor, Ewha Women's University, Korea
Scott Pearsall (Roswell Park Cancer Institute, 1998), 1998-2000; Subsequent position: Director of Preclinical Pharmacology, Acceleron Pharmaceuticals

High school students
Supriya Sivadanam, Enloe High School, NC, 2012 (summer)
Miguel Sanchez, Southeast Raleigh Magnet High, NC 2010 (semester)
Victoria Massie, NC School of Math and Science, NC 2006-2007 (school year)
Elana Adamo, NC School of Math and Science, NC, 2000-2001 (school year)
Brandon Schecter, Montgomery Bell Academy, TN, 1998 (summer)

Junior faculty (pre-NCSU)
Dr. Scott Bultman (Assistant Professor of Genetics, UNC), Faculty mentor, resulted in a funded R01 grant, 2005-2008
Dr. Ivan Rusyn (Assistant Professor of Environmental Health and Engineering, UNC), Faculty mentor, resulted in two funded R01 grants, 2002-2005
Dr. Fei Zou (Assistant Professor of Biostatistics, UNC), Faculty mentor, resulted in a funded R21 grant, 2001-2003
Dr. Delores Grant (Assistant Professor of Biology, North Carolina Central University), Faculty mentor as part of a UNC-NCCU partnership, 2002-2007

Sabbatical host
Dr. Gudrun Brockmann (Professor, Humboldt-Universität zu Berlin, Germany), 2011
Dr. Joan Claria (Assistant Professor, Institut d'Investigacions Biomèdiques in Barcelona, Spain), 2001

Research Funding

Pending (total direct costs)
Primary and stem cell-based resources from the Collaborative Cross, NIH/OD, R24, PI, 10/1/13-9/30/18, $2,000,000
Genetic susceptibility to trichloroethylene and arsenic co-exposure, NIH/NIEHS, R01, PI, 10/1/13-9/30/18, $2,400,000

Active (total/yearly direct costs)
The International Mammalian Genome Conference, NIH/NHGRI, R13 HG002394, PI, 9/30/01-8/31/14, $140,000/$35,000

Modeling heterogeneity for safe cancer prevention and detection (NCI Mouse Models of Human Cancer Consortium), NIH/NCI, U01 CA105417, PI, 8/15/04-7/31/14, $6,000,000/$550,000
Science Leadership and Integration (NCI Mouse Models of Human Cancer Consortium), NIH/NCI, U01 CA141455, Subcontract PI (University of California-San Francisco), 9/1/09-8/31/14, $125,000/$25,000
Systems genetics research consortium, U01 CA134240, NIH/NCI, PI, 9/28/07-8/31/13, $4,000,000/$750,000
Erbb receptors in normal and cancerous colon biology, R01 CA092479, NIH/NCI, PI, 6/1/01-1/31/14, $1,900,00/$192,000
Genetic control of colorectal cancer histopathology, R01 CA079869, NIH/NCI, PI, 7/31/99-7/31/14, $1,900,00/$193,000
An interdisciplinary program for systems genomics of complex behaviors, NIH P50 MH090338, NIH/NIMH, Subcontract PI (UNC), 7/1/09-6/30/14, $400,000/$75,000

Active awards of trainees (total/yearly direct costs)
Identification of flat colorectal cancer modifiers, F32 CA145048, NIH/NCI (David Bautz, postdoc), 3/27/11-6/30/13, $120,000/$51,000
Identifying genes controlling epigenetic stability in induced pluripotent stem cells, NSF (Tiffany Garbutt, PhD student), 7/1/12-6/30/15, $150,000/$50,000
Identification of colorectal cancer metastasis modifiers, F32 CA145048, NIH/NCI (Rachel Lynch, postdoc), 8/1/12-7/30/15, $158,000/$51,000

Previous (total direct costs)
Genetic control of hepatic fibrogenesis, R21 AA019474, NIH/NIAAA, Subcontract PI (East Carolina University), 9/30/10-9/31/12, $30,000
New faculty recruitment for systems genetics research core center, P30 GM092371, NIH/NIGMS, PI, 9/30/09-8/31/12, $500,000 (ARRA Award)
Revolutionizing preclinical detection of risk factors for idiosyncratic drug-induced liver injury, RC1 DK087510, NIH/NIDDK, PI, 9/30/09-7/31/12, $1,000,000 (ARRA Award)
UNC SPORE in gastrointestinal cancer, P50 CA106991, NIH/NCI, Project 3: EGFR and ERBB as targets colon cancer targets, Project PI, 9/28/04-9/27/09, $1,000,000
Profiles of susceptibility to toxicant stress, U19 ES11391, NIH/NIEHS, Project 3: Mouse strain-specific molecular profiles in response to toxicants, Project PI, 9/27/01-9/26/07, $1,300,000
Functional genomics of Egfr in placental development, R01 HD39896, NIH/NICHD, PI, 7/1/01-6/30/07, $1,125,000
Role of the gastrointestinal flora in susceptibility to obesity and cancer, Lineberger Cancer Center Pilot Grant, PI, 9/1/05-8/31/06, $25,000
Mouse cancer models via TGF-beta RII loss, U01 CA084239, NIH/NCI, Subcontract PI (Vanderbilt), 9/25/99-3/31/04, $500,000
Host-dependent variation in gut flora colonization, NIDDK Center for Gastrointestinal Biology and Disease Pilot Grant, PI, 6/1/02-5/31/03, $20,000
EGF-receptor and intrauterine growth retardation, 5-FY97-0679, March of Dimes, PI, 2/1/98-1/31/00, $150,000
The Erbb receptor tyrosine kinases: a model for receptor interaction and specificity, MCB-9729645, NSF, PI, 3/1/98-2/27/01, $300,000
An animal model of hereditary non-polyposis colorectal cancer, Jimmy V Foundation, PI, 6/1/98-5/31/00, $100,000
Genetic analysis of experimental colorectal cancer, RPG 89341, American Cancer Society, PI, 7/1/98-6/30/01 (relinquished 6/30/99 in favor of overlapping NIH grant R01 CA079869), $300,000

Genome scan for tumor suppressors, American Cancer Society-Institutional Research Pilot Grant, PI, 7/1/97-6/30/98, $15,000
Azoxymethane-induced colorectal cancer, Vanderbilt Cancer Center Institutional Research Pilot Grant, PI, 7/1/97-6/30/9, $20,000
Microarray Shared Facility, Kleberg Foundation, PI, 7/1/97-6/30/00, $500,000

Previous awards of trainees (total direct costs)
Minority predoctoral fellowship program, F31 CA123636, NIH/NIEHS (Chevonne Eversley, PhD student), 8/1/07-6/30/09, $90,000
Epigenetic analysis of alcohol-induced liver injury, F32 AA016860, NIH/NIAAA (Christine Rubinshteyn, postdoc), 12/1/07-11/30/10, $142,000
Effects of CAMS on EGFR-targeted therapy, F31 AT002835, NIH/NCCAM (Erica Rinella, PhD student), 9/26/05-8/31/08, $90,000
Environmental and genetic influences on breast cancer susceptibility, BC050873, DOD (Michelle LaMerrill, PhD student), 6/1/05-5/30/08, $130,000
Molecular analysis of toxicant induced colon cancer, F31 ES012354, NIH/NIEHS (Anika Bissahoyo, PhD student), 9/27/02-8/31/04, $90,000

Professional Service

Discipline
National Consortium for Data Science, steering committee member, 2012-present
External Advisory Board, Moffitt Cancer Center SPORE in GI Cancer, 2012-present
External Departmental Reviewer (Chair), Department of Molecular Virology, Immunology and Medical Genetics, Ohio State University, 2012
NIH Center for Regenerative Medicine, Industry Interactions Workgroup (Speaker), 2012
External Advisory Board, Whole Systems Genomics Initiative, Texas A&M University, 2010-present
AACR Think Tank on Clinical and Translational Cancer Research (Speaker), San Francisco, CA, 2010
International Committee on Standardized Genetic Nomenclature for Mice, member (elected), 2009-2014
NIEHS Search Committee for Developmental Biologist, External committee member, 2009
Carolina Center for Computational Toxicology, External Advisory Board, 2009-present
International Mammalian Genome Society, President-elect (elected), 2008-2010, President, 2010-2012, Past-President, 2012-2014
Center for Integrative Genomics, University of Lausanne, Switzerland, External Advisor, 2008
NIEHS Search Committee for Chief of Host Susceptibility Branch, External committee member, 2008
International Mammalian Genome Society, Secretariat (elected), 2007-2008 (resigned to accept role of President-elect)
NCI Think Tank on Mouse Models and Early Interventions, 2007
Centre for Modeling Human Disease, External Advisor, Toronto, Canada, 2007
Gordon Conference on Quantitative Genetics and Genomics, Session Chair, 2007
Keystone Symposia on Reproduction: Advances and Challenges, Session Chair, 2007
NHLBI Genes and the Environment Initiative Workshop speaker, 2007
Vanderbilt-ORNL Superfund Program, External Advisory Board, 2006-2008
NCI Radiation Carcinogenesis Workshop speaker, 2006
External Advisor to planning committee for Division of Quantitative Genetics, Cincinnati Children's Hospital Research Foundation, 2006
NIEHS Advisory Panel on Multi-Strain Approaches for Toxicity Testing, 2005

AACR Annual Meeting, Member of the Animal Models and Other Model Organisms Subcommittee, 2005
Vanderbilt SPORE in GI Cancer, External Advisory Board, 2005-present
NIEHS Search Committee for Faculty position in the Laboratory of Respiratory Biology, External committee member, 2004
NCI Director's Think Tank on Susceptibility and Resistance to Cancer, Chair, 2004
18th International Mammalian Genome Meeting, Session Chair, 2004
Colon Cancer in Murine Models and Humans, Session Chair, 2004
International Mammalian Genome Society, Nomination and Election Committee (elected), 2003-2005
NCI-Mouse Models of Human Cancer Consortium, Steering Committee, 1999-present
NHGRI Advisory Panel on Mouse SNP Resources, 2002
NHGRI Advisory Panel on Genetic Variation, 2002
Complex Trait Consortium, Co-founder, 2002
Tennessee Mouse Genome Consortium, Co-founder and Scientific Working Group, 1998-2000

Institution
College of Sciences, Internal Organizational Steering Committee, NCSU, 2012-2013
College of Sciences, Laboratory Animal Resources Subcommittee for College of Sciences Infrastructure, NCSU, 2012-2013
College of Agriculture and Life Science 26th Annual Graduate Student Professional Development Workshop, Faculty Organizer, NCSU, 2012
College of Sciences Academic Program, Personnel and Policy Implementation Team, NCSU, 2012
College of Agriculture and Life Sciences Department Heads representative to Dean and Directors executive committee, NCSU, 2011
College of Agriculture and Life Sciences Academic Advisory Committee, NCSU, 2010-2011
University Strategic Planning Steering Committee member, and Research and Scholarship Task Force co-chair, NCSU, 2010-2011
Health and Wellbeing University Advisory Committee, NCSU, 2009-2010
Implementation Team for the NC State Response to the UNC Vision for Technology Transfer, NCSU, 2009-2010
Sponsored Projects Management Administrative Processes Improvement Task Force member, NCSU, 2009-2010
College of Agriculture and Life Sciences research grant director search committee, NCSU, 2009
Cancer Genetics faculty search committee chair, UNC, 2007
Lineberger Post-doctoral Fellowship selection committee, UNC, 2007-2008
Lineberger Graduate Fellow Award committee, UNC, 2006-2008
Interdisciplinary Obesity Training Post-doctoral Fellowship selection committee, UNC, 2006-2008
Curriculum in Toxicology, Graduate Admissions Committee, UNC, 2005-2007
Biomedical Sciences Graduate Training Task Force, Committee Member, UNC, 2005-2006
Nutrition faculty search committee, UNC, 2004
Institutional Animal Care and Use Committee, UNC, 2004-2008
Marilyn Gentry Fellowship Program in Nutrition and Cancer selection committee, UNC, 2004-2006
Curriculum in Genetics and Molecular Biology, Director of Admissions, UNC, 2003-2006
Lineberger faculty search committee, UNC, 2002-2005
Division of Laboratory Animal Medicine Advisory Committee, UNC, 2001-2008
Curriculum in Genetics and Molecular Biology, Graduate Admission Committee, UNC, 2000-2001
Microarray and Genomics Core, Faculty Scientific Co-Advisor, UNC, 2000-2005
Institutional Animal Care and Use Committee, Vanderbilt, 1998-2000
Genetics Task Force, Vanderbilt, 1998-2000

Intramural seminars
Department of Environmental and Molecular Toxicology, NCSU, 2011
Department of Biology, NCSU, 2011
Department of Environmental and Molecular Toxicology, NCSU, 2009
Department of Molecular Biomedical Sciences, NCSU, 2009
Department of Genetics, UNC, 2008
Lineberger Cancer Center, UNC, 2007
Center for Gastrointestinal Biology and Disease, UNC, 2007
Symposium on Bacteria in Health and Disease, UNC, 2006
Frontiers in Medicine-Genetics Symposium, UNC, 2004
Department of Pharmacology, UNC, 2004
Department of Biology, UNC, 2003
Curriculum in Toxicology, UNC, 2001
Department of Pathology Grand Rounds, UNC, 2001
Curriculum in Genetics and Molecular Biology, UNC, 2000
Vanderbilt-Ingram Cancer Center On the Horizon Series, Vanderbilt University, 2000
Department of Biomedical Engineering, Vanderbilt University, 1998
Vanderbilt-Ingram Cancer Center Frontiers Series, Vanderbilt University, 1998
Department of Molecular Biology, Vanderbilt University, 1997
Center for Reproduction Biology, Vanderbilt University, 1997
Renal Biology Research Conference, Vanderbilt University, 1997

Extramural seminars
Institute Pasteur, Paris, France, 2014
University of Michigan, Department of Human Genetics, Ann Arbor, MI, 2013
Texas A&M University, Department of Veterinary Pathobiology, 2013
Texas A&M University Health Science Center, Department of Molecular and Cellular Medicine, 2013
Integrated Laboratory Systems Inc, Research Triangle Park, NC, 2012
NIH Associate Directors Monthly Research Meeting, 2012
University of Florida, Genetics Institute, 2012
National Human Genome Research Institute, Bethesda, MD, 2011
National Institute of Environmental Health Sciences, Receptor Mechanisms Group, Research Triangle Park, NC, 2011
Cancer Research UK, Cambridge University, UK, 2011
University of North Carolina, Center for Gastrointestinal Biology and Disease, Chapel Hill, NC, 2011
Simons Foundation Autism Research Initiative, New York, NY, 2011
Duke University, University Program in Genetics and Genomics, Durham, NC, 2010
National Cancer Institute, Laboratory of Cancer Prevention, Frederick, MD, 2010
Western Australian Institute for Medical Research, Perth, Australia, 2010
Creighton University, Department of Biomedical Sciences, Omaha, NE, 2010
MD Anderson Science Park, Department of Carcinogenesis, Smithville, TX, 2010
National Cancer Institute, Division of Cancer Prevention, Bethesda, MD, 2010
National Institute of Environmental Health Sciences, Division of Extramural Research and Training, Research Triangle Park, NC, 2010
Triangle Immunology Interest Group, Research Triangle Park, NC, 2010
University of Chicago Cancer Research Center, Chicago, IL, 2009
University of Chicago, Section of Gastroenterology, Chicago, IL, 2009
Merrimack Pharmaceuticals, Cambridge, MA, 2009
Hamner Institutes for Health Sciences, Research Triangle Park, NC, 2009
Food and Drug Administration, Washington, DC, 2008

University of Pittsburgh, Department of Environmental and Occupational Health, Pittsburgh, PA, 2008
University of Massachusetts Medical Center, Department of Cancer Biology, Worcester, MA, 2008
Merrimack Pharmaceuticals, Boston, MA, 2008
Massachusetts General Hospital Cancer Center, Boston, MA, 2008
Vanderbilt University, GI Spore Program, Nashville, TN, 2008
North Carolina State University, Department of Genetics, Raleigh, NC, 2008
Thomas Jefferson University, Kimmel Cancer Center, Philadelphia, PA, 2008
Ohio State University, Human Cancer Genetics Program, Columbus, OH, 2008
University of Wisconsin, McArdle Laboratory for Cancer Research, Madison, WI, 2008
Stowers Institute for Medical Research, Kansas City, MO, 2008
MD Anderson Cancer Center, Department of Gastrointestinal Medical Oncology, Houston, TX, 2007
National Cancer Institute Board of Scientific Advisors, 2007
Washington University, Division of Oncology, St. Louis, MO, 2007
National Cancer Institute, Mouse Cancer Genetics Program, Frederick, MD, 2006
Oak Ridge National Laboratory, Oak Ridge, TN, 2006
University of Tennessee, Joint Institute for Biological Sciences, Knoxville, TN, 2006
National Cancer Institute, Cancer Genetics Retreat, Cumberland, MD, 2006
University of Michigan, Department of Human Genetics, Ann Arbor, MI, 2006
Memorial Sloan Kettering Cancer Center, Program in Cancer Biology and Genetics, New York, NY, 2005
Roswell Park Cancer Institute, Department of Molecular and Cellular Biology, Buffalo, NY, 2005
Case Western Reserve University, Case Cancer Center, Cleveland, OH, 2005
National Human Genome Research Institute, Bethesda, MD, 2004
North Carolina State University, Department of Genetics, Raleigh, NC, 2004
University of Nebraska, Department of Animal Science, Lincoln, NE, 2003
University of California, Irvine, Department of Epidemiology, Irvine, CA, 2003
National Institute of Environmental Health Sciences, Receptor Mechanisms Discussion Group, Research Triangle Park, NC, 2003
University of Wisconsin at Madison, McArdle Cancer Colloquium, Madison, WI, 2003
University of California at San Francisco, UCSF Comprehensive Cancer Center, San Francisco, CA, 2003
Cornell University, Genetically Modified Mice in Medicine and Pathology Series, Ithaca, NY, 2002
MD Anderson Science Park, Department of Carcinogenesis, Smithville, TX, 2002
Environmental Protection Agency, Research Triangle Park, NC, 2002
National Cancer Institute, Cancer Prevention Working Group, Frederick, MD, 2002
Johns Hopkins University, Institute for Medical Genetics, Baltimore, MD, 2002
North Carolina Central University, Biomedical/Biotechnology Research Institute, Durham, NC, 2002
National Institute of Environmental Health Sciences, Research Triangle Park, NC, 2001
North Carolina State University, Dept of Environmental and Molecular Toxicology, Raleigh, NC, 2001
University of Kansas Medical Center, Dept of Molecular and Integrative Physiology, Kansas City, KS, 2000
University of Tennessee, Dept of Anatomy and Neuroscience, Memphis, TN, 2000
University of North Carolina, Dept of Genetics, Chapel Hill, NC, 2000
The Jackson Laboratory, Bar Harbor, ME, 1999
Baylor College of Medicine, Dept of Human and Molecular Genetics, Houston, TX, 1999
University of Iowa, Dept of Pharmacology, Iowa City, IA, 1998
ONYX Pharmaceuticals, Richmond, CA, 1998
Stanford University, Dept of Developmental Biology, Palo Alto, CA, 1998
National Institute of Environmental Health Sciences, Research Triangle Park, NC, 1996
European Molecular Biology Laboratory, Heidelberg, Germany, 1995

Vanderbilt University, Vanderbilt-Ingram Cancer Center, Nashville, TN, 1995
University of Missouri, Dept of Veterinary Pathobiology, Columbia, MO, 1995

Keynote and invited conference platform talks

12th Annual AACR International Conference on Frontiers in Cancer Prevention Research, National Harbor, MD, 2013
44th Annual Conference of the German Genetics Society, Braunschweig, Germany, 2013
39th Annual Summer Meeting of The Toxicology Forum, Aspen, CO, 2013
XIII International Congress of Toxicology, Seoul, Korea, 2013
52nd Annual Meeting of the Society of Toxicology, San Antonio, TX, 2013
American Gastroenterological Association Digestive Diseases Week, Orlando, FL, 2013
FASEB Summer Research Conference, Gastrointestinal Tract XV: Stem Cells, Adaptation, Inflammation and Cancer, Steamboat Springs, CO, 2013
European Systems Genetics Network Annual Meeting, Bilbao, Spain, 2012
Application of Genomics to Mechanism-Based Risk Assessment Symposium, Health and Environmental Sciences Institute, Washington, DC, 2012
The Many Hosts of Myocbacteria V: Advancing Translational Science, Washington, DC, 2012
11th Annual Complex Trait Community Meeting, Paris, France, 2012
Beef Improvement Federation Annual Research Symposium, Houston, TX, 2012
10th Annual AACR International Conference on Frontiers in Cancer Prevention, Boston, MA, 2011
3rd International Conference on Toxicogenomics Integrated with Environmental Sciences, Chapel Hill, NC, 2011
7th Annual Center for Vertebrate Genomics Symposium, Cornell University, Ithaca, NY, 2011
International Consortium on the Molecular Biology of Neurofibromatosis type 1, Neurofibromatosis type 2, and Schwanomatosis, Jackson Hole, WY, 2011
AACR Special Conference Colorectal Cancer: Biology to Therapy, Philadelphia, PA, 2010
Association of American Cancer Institutes Annual Meeting, Chicago, IL, 2010
4th International Systems Radiation Biology Workshop, New York, NY, 2010
UNC School of Pharmacy Drug Conference, Chapel Hill, NC, 2010
1st EU SYSGENET Meeting, Braunschweig, Germany, 2010
AASLD-FDA-NIH-PhRMA Hepatotoxicity Steering Group Meeting, Washington, DC, 2010
49th Annual Meeting of the Society of Toxicology, Salt Lake City, UT, 2010
Plant and Animal Genome XVIII Conference, San Diego, CA, 2010
Mouse Models of Human Cancer Consortium Metabolism Symposium, San Francisco, CA, 2010
23rd International Mammalian Genome Society Meeting, San Diego, CA, 2009
100th Annual AACR Meeting, Education Session, Denver, CO, 2009
Genetics and Environmental Mutagenesis Society, Research Triangle Park, NC, 2009
AACR Special Conference on Mouse Models of Cancer, San Francisco, CA, 2009
25th Annual Neurotoxicology Meeting, Rochester, NY, 2008
NIEHS Genetic Susceptibility to Air Pollution, Chapel Hill, NC, 2008
63rd Annual Scientific Convention and Meeting, Society of Biological Psychiatry, Washington, DC, 2008
Triangle Virology Association Symposium, Research Triangle Park, NC, 2008
Texas A&M University Graduate Student Association of the College of Veterinary Medicine and Biomedical Sciences Spring Research Symposium, Keynote Speaker, College Station, TX, 2008
Symposium on Mouse Resources to Map Complex Traits, Lausanne, Switzerland, 2008
47th Annual Meeting of the Society of Toxicology, Seattle, WA, 2008
NY Academy of Sciences: Targeted Therapies for Gastrointestinal Cancer, New York NY, 2008
Annual Workshop for the Centre for Modeling Human Disease, Toronto, Canada, 2007

University of Virginia Graduate Biosciences Society Spring Research Symposium, Keynote Speaker, Charlottesville, VA, 2007
1st International Conference on Toxicogenomics Integrated with Environmental Sciences, Raleigh, NC, 2007
American Gastroenterological Association Digestive Diseases Week, Washington, DC, 2007
98th Annual AACR Meeting, Education Session, Los Angeles, CA, 2007
Keystone Symposium on Mouse Models at the Frontier of Cancer Discovery, Whistler, BC, Canada, 2007
24th Annual Stadler Genetics Symposium, Columbia, MO, 2006
2nd Annual Conference of the NIEHS Center for Rodent Genetics, Research Triangle Park, NC, 2006
37th Annual Meeting of the Environmental Mutagen Society, Vancouver, Canada, 2006
8th International Congress on Genetics Applied to Livestock Production, Belo Horizonte, Brazil, 2006
Current and Future Challenges in Environmental Health, Toxicology, Food Safety in Central and Eastern Europe, Kiev, Ukraine, 2006
45th Annual Meeting of the Society of Toxicology, San Diego, CA, 2006
30th Annual Lineberger Cancer Symposium, Chapel Hill, NC, 2006
Annual Meeting of the Toxicogenomics Research Consortium, Portland, OR, 2005
4th Annual Complex Trait Consortium Meeting, Groningen, The Netherlands, 2005
96th Annual AACR Meeting, Meet-the-Expert Sunrise Session, Anaheim, CA, 2005
96th Annual AACR Meeting, Mouse Models of Cancer Session, Anaheim, CA, 2005
96th Annual AACR Meeting, Methods Workshop, Anaheim, CA, 2005
96th Annual AACR Meeting, Education Session, Anaheim, CA, 2005
30th Annual Winter Meeting of the Toxicology Forum, Washington, DC, 2005
2nd Annual Predictive Toxicology, Cambridge Healthtech Institute, San Deigo, 2005
Annual Meeting of the Toxicogenomics Research Consortium, Chapel Hill, NC, 2004
Comparative Toxicogenomics Symposium, Duke University, Durham, NC, 2004
National Institute of Environmental Health Sciences, Microarray Symposium, Research Triangle Park, NC, 2004
Colon Cancer in Murine Models and Humans, Bar Harbor, ME, 2004
3rd Annual Complex Trait Consortium Meeting, Bar Harbor, ME, 2004
Workshop on Mechanisms of Genetic Instability in Colon Cancer, Coleraine, Northern Ireland, UK, 2004
Keystone Symposium on Mouse Models of Human Cancer, Keystone, CO, 2004
NIEHS Comparative Mouse Genomics Centers Consortium Meeting, Cincinnati, OH, 2003
17th International Mouse Genome Conference, Braunschweig, Germany, 2003
5th EMBL Mouse Molecular Genetics Meeting, Heidelberg, Germany, 2003
2nd Annual Complex Trait Consortium Meeting, Oxford, UK, 2003
American Gastroenterological Association Digestive Diseases Week, Orlando, FL, 2003
MMHCC Nervous System Tumor Conference, San Diego, CA, 2002
Modeling Human Cancer in Mice: Pre-Clinical Trials, Bar Harbor, ME, 2002
1st Annual Complex Trait Consortium Meeting, Memphis, TN, 2002
15th International Mouse Genome Conference, Edinburgh, Scotland, 2001
Mouse Initiatives III: Modeling the Human Genome and Disease, Bar Harbor, ME, 2001
2nd Wisconsin Symposium on the Analysis of Human Biology: Genes, Genomes, and Molecules, Madison, WI, 2001
Genetic Modifiers of Cancer Susceptibility: Lessons from Human Population Studies and Mouse Models, AACR Special Conference, Incline Village, NV, 2001
Modeling Human Cancer in Mice: Colorectal Cancer, Bar Harbor, ME, 2000
17th Symposium on the Molecular Biology of Tropical Diseases, Nashville, TN, 2000
Tennessee 2000 Biomedical Engineering Conference, Knoxville, TN, 2000

Vanderbilt-Ingram Cancer Center Retreat, Nashville, TN, 1999
American Gastroenterological Association Digestive Diseases Week, Orlando, FL, 1999
Mammalian Embryogenesis Gordon Research Conference, New London, NH, 1994
Edison Biotechnology Institute: Transgenic Technologies, Columbus, OH, 1994

Public lectures/outreach
Onslow County Schools, NC, teachers training for new state-wide genetics requirements for 5th grade science, 2013
Osher Lifelong Learning Institute at Duke, Symposia: Scientific Excursions and Diversions invited speaker series, Durham, NC, 2010

Conference organizer
Genetics Society of America Mouse Genetics 2011 (400 participants), Washington, DC, 2011
Colon Cancer in Murine Models and Humans III (125 participants), Bar Harbor, ME, 2010
20th Annual Meeting of the International Mammalian Genome Society (230 participants), Charleston, SC, 2006
5th Annual Meeting of the Complex Trait Consortium (175 participants), Chapel Hill, NC, 2006

Conference organizing committee
26th Annual Meeting of the International Mammalian Genome Society (130 participants), St. Petersburg, FL, 2012
European Commission-NIH-Genome Canada Workshop on 'The Future of Research on Mouse Functional Genomics', Brussels, Belgium, 2007
NCI workshop on the 'Predictive Models of Cancer Susceptibility: Integrated Strategies', Huntington Beach, CA, 2005
3rd Annual Meeting of the Complex Trait Consortium, Bar Harbor, ME, 2004
1st Annual Meeting of the Complex Trait Consortium, Memphis, TN, 2002

Journal editorial boards
Cancer Prevention Research, 2008-present
Genetics Research, 2010-2013
Mammalian Genome, 2011-present

Associate editor
Genetics, 2009-present
G3: Genes, Genomes, and Genetics, 2011-present
Frontiers in Complex Trait Genetics, 2010-present

Manuscript reviews
Genomics; Mammalian Genome; Laboratory Animal Science; Cancer Research; Journal of Molecular Endocrinology; Cell Growth and Differentiation; Genetics; Molecular and General Genetics; Genome Biology; Genesis; Proceedings of the National Academy of Sciences; BioTechniques; ILAR Journal; Genome Research; Gastroenterology; Molecular and Cellular Biology; Circulation; Cytokine; Clinical Cancer Research; Brain Research; Journal of the American Society for Information Science and Technology; Nature Genetics; Alcoholism: Clinical and Experimental Research; Human Molecular Genetics; Trends in Genetics, Molecular Carcinogenesis; Physiological Genomics; Science; Nature; Nature Medicine; Aging Cell

Study sections and grant review panels
NCI Cancer Biology Study Section, 2012

Shriner's Hospital Research Institute, 2012
NCI Oncological Sciences Fellowship Study Section (Chair, 3 meetings), 2012
DOD Discovery Awards-Genetic Cancers Panel, 2012
DOD Discovery Awards-Colon Cancer Panel, 2012
NCI Integrative Cancer and Microenvironment Study Section, 2011
Shriner's Hospital Research Institute, 2011
NIH Member Conflict Special Emphasis Panel (Chair, 1 meeting), 2010
NIH Oncology Fellowship Study Section (1 meeting), 2010
NIAAA Special Emphasis Panel, Genetics of Alcoholism, 2010
AACR Basic Cancer Research Fellowship Review Committee, 2010
NIH Genetics of Health and Disease Study Section (1 meeting), 2010
NIH Cancer Genetics Study Section (1 meeting), 2010
NIH Oncology Fellowship Study Section (2 meetings), 2009
NIH Shared Instrumentation: Microscopy and Imaging Study Section (1 meeting), 2009
NCI ARRA Grand Opportunities, Comparative Oncology, 2009
NCI ARRA Competitive Revisions, Basic and Translational Oncology, 2009
NIH Oncology Fellowship Study Section (2 meetings), 2008
NCI SPORE Programs Study Section (1 meeting), 2007
NIEHS Special Emphasis Panel, Biological Response Indicators of Environmental Stress Centers, 2007
NIMH Conte Center Program Review Panel (Chair, 1 meeting), 2007
Oak Ridge National Laboratory, Life Sciences Division Laboratory Directed Research and Development Review Panel, 2006
NIMH Special Emphasis Panel, Mouse Resources for the Nervous System, 2006
NHGRI Special Emphasis Panel, Genome Research Resources, 2006
NIMH Conte Center Program Review Panel (1 meeting), 2006
NIH Cancer Genetics Study Section, member, 2005-2008
NIH Cancer Genetics Study Section (2 meetings), 2005
NCI SPORE in Breast Cancer (1 meeting), 2005
DOE Oak Ridge National Laboratory Mouse Genetics Program, 2004
NIH Special Emphasis Panel, Resequencing the Mouse Genome, 2004
NIH Cancer Genetics Study Section (3 meetings), 2004
DOD Molecular Biology and Genetics of Breast Cancer Review Panel, 2003
NIH Mammalian Genetics Study Section (1 meeting), 2003
NIH Special Emphasis Panel, Pre-clinical Cancer Therapeutics, 2002
DOD Molecular Biology and Genetics of Breast Cancer Review Panel (1 meeting), 2002
NIH Mammalian Genetics Study Section (1 meeting), 2002
NIH Mammalian Genetics Study Section (1 meeting), 2001
NIH Biological Sciences 1 Study Section (1 meeting), 2001
NIH Biological Sciences 1 Study Section (1 meeting), 2000
NIH Biological Sciences 1 Study Section (1 meeting), 1999
NIH International and Cooperative Projects Study Section (1 meeting), 1999
USDA Animal Molecular Genetics and Gene Mapping Panel, 1997
USDA Animal Molecular Genetics and Gene Mapping Panel, 1995
USDA Animal Molecular Genetics and Gene Mapping Panel, 1993

Program site visits/reviews
NIEHS National Toxicology Program, 2009
NIEHS Center Program site visit (1 site), 2005
NIEHS Mouse Comparative Genomics Program, 2004

NCI Program Project Grant site visit (2 sites), 2004
NCI Program Project Grant site visit (3 sites), 2003
NCI Intramural Mouse Cancer Genetics Program, 2003
NCI Program Project Grant site visit (3 sites), 2002

Ad hoc grant reviews
USDA Animal Molecular Genetics and Gene Mapping; USDA Sustaining Animal Health and Well-Being; NSF Eukaryotic Genetics; Alberta Innovation and Science; US Department of Energy; Vanderbilt University Discovery Grant Program; NIH Immunological Sciences Study Section; Vanderbilt GI SPORE; Vanderbilt Diabetes Center; Wellcome Trust; Oak Ridge Associated Universities; Bankhead-Coley Cancer Research Program; Pennsylvania Cancer Research Program Performance Review; Research Grants Council of Hong Kong; L'Agence Nationale de la Recherche, France; Medical Research Council Grants Program, UK

Technology Transfer

Patents
Threadgill DW, Lee D. Co-Inventors. Modulation of epidermal growth factor receptor heterodimer activity. #8,323,987 issued 12/4/2012
Threadgill DW, Barrick C. Co-Inventors. Use of EGFR inhibitors to prevent or treat obesity. Filed 7/06
Threadgill DW, Lee D. Co-Inventors. In vitro mutagenesis, phenotyping, and gene mapping. US Patent #7,208,317 issued 4/24/2007.

Companies
Microarrays, Co-founder, Nashville, TN, 2000. Moved to HudsonAlpha Institute, Birmingham, AL, 2008 and sold to private investors, 2010