

CURRICULUM VITAE

Charlotte Anne Hobbs, M.D., Ph.D.

(3/30/2016)

Arkansas Center for Birth Defects Research and Prevention

University of Arkansas for Medical Sciences

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Little Rock, AR 72202

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EDUCATION

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| 1992 | M.D., McMaster University, Hamilton, Ontario |
| 1991 | Ph.D. in Epidemiology and Biostatistics, McGill University, Montreal, Quebec |
| 1981 | Master's of Science in Human Communication Disorders, McGill University, Montreal, Quebec |
| 1979 | Bachelor's of Education, Queen's University, Kingston, Ontario |
| 1978 | Bachelor's of Arts with Distinction, Carleton University, Ottawa, Ontario |
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POST-DOCTORAL TRAINING

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| 1993-1996 | Residency, Department of Pediatrics, University of Arkansas for Medical Sciences, Little Rock, Arkansas |
| 1992-1993 | Internship, Family Medicine, McGill University, Montreal, Quebec |
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ACADEMIC RANK

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|--------------|---|
| 2008-present | Professor, Department of Pediatrics, University of Arkansas for Medical Sciences and Arkansas Children's Hospital, Little Rock, Arkansas |
| 2014-present | Adjunct Professor, Department of Epidemiology, College of Public Health, University of Arkansas for Medical Sciences, Little Rock, Arkansas |
| 2002-2008 | Associate Professor, Department of Pediatrics, University of Arkansas for Medical Sciences and Arkansas Children's Hospital, Little Rock, Arkansas |
| 2001-2014 | Adjunct Assistant Professor, Department of Epidemiology, College of Public Health, University of Arkansas for Medical Sciences, Little Rock, Arkansas |
| 1996-2002 | Assistant Professor, Department of Pediatrics, University of Arkansas for Medical Sciences and Arkansas Children's Hospital, Little Rock, Arkansas |

1984-1987 Lecturer, Graduate School, McGill University, Montreal, Quebec

ADMINISTRATIVE LEADERSHIP

2014-present Executive Associate Dean for Research, College of Medicine,
University of Arkansas for Medical Sciences, Little Rock, Arkansas

2002-present Director, Arkansas Center for Birth Defects Research and Prevention,
University of Arkansas for Medical Sciences, and Arkansas Children’s
Hospital, Little Rock, Arkansas

2001-2015 Section Chief, Birth Defects Research, Department of Pediatrics,
University of Arkansas for Medical Sciences, and Arkansas Children's
Hospital, Little Rock, Arkansas

1997-2002 Co-Director, Arkansas Center for Birth Defects Research and
Prevention, University of Arkansas for Medical Sciences, and
Arkansas Children’s Hospital, Little Rock, Arkansas

1996-2015 Scientific Director, Arkansas Reproductive Health Monitoring System,
Arkansas Children’s Hospital, Little Rock, Arkansas

1996-present Medical Director, Arkansas Reproductive Health Monitoring System,
Arkansas Children’s Hospital, Little Rock, Arkansas

PROFESSIONAL CERTIFICATION

1998-present American Board of Pediatrics – No. 064556

1999-present Neonatal Resuscitation Program Instructor – No. 6020206

LICENSURE

1996-present Arkansas State Medical Board – No.0971

HOSPITAL APPOINTMENTS - ACTIVE STAFF NEONATOLOGY LEVEL I AND II

1996-present University of Arkansas for Medical Sciences, Little Rock, Arkansas

1996-present Arkansas Children’s Hospital, Little Rock, Arkansas

1981-1983 Brandon General Hospital, Speech Pathologist, Brandon, Manitoba,
Canada

AWARDS AND HONORS

2013 Dr. Robert H. Fiser, Jr. Research Achievement Award

2011 Alpha Omega Alpha Honor Medical Society

2008	Dean's Distinguished Faculty
2008-2010	Arkansas Children's Hospital Research Institute Board Member
2005-present	Member, National March of Dimes Scientific Advisory Committee on Prematurity
2004-present	Pamela D. Stephens Endowed Chair for Birth Defects Research (Inaugural Recipient)
1998	Educator of the Year Award, Department of Pediatrics, University of Arkansas for Medical Sciences, Little Rock, Arkansas
1996	Donald E. Hill Memorial Award for Excellence in Research, Department of Pediatrics, University of Arkansas for Medical Sciences, Little Rock, Arkansas
1990-1991	Farquharson Fellowship, Competitive Award, Medical Research Council of Canada
1986-1989	Doctoral Fellowship, Competitive Award, National Health Research and Development Program, Ottawa, Canada
1980-1981	McConnell Graduate Student Fellowship, Competitive Award, McGill University, Montreal, Quebec
1980	Competitive Research Award, McGill University, Montreal, Quebec
1978	Senate Medal for Outstanding Academic Achievement, Carleton University, Ottawa, Ontario

EXTRAMURAL RESEARCH SUPPORT

Active (Current) Extramural Research Support

Agency: CDC	Grant Number: 5U01DD001039-03
Role: PI	Effort: 20%
Project Period: 09/01/2013-08/31/2018	Total Costs: \$3,500,000

Birth Defects Study to Evaluate Pregnancy exposures (BD-STEPS)

The Arkansas Center for Birth Defects Research and Prevention is one of six institutions to receive new funding, after the success of the National Birth Defects Prevention Study (NBDPS). This study will build upon the results of the NBDPS to examine how maternal exposure to medications and diseases like diabetes and obesity may increase the risk of having a baby with a birth defect.

Agency: NICHD	Grant Number: 5R01HD039054-14
Role: PI	Effort: 19%
Project Period: 04/01/2012-03/31/2017	Total Costs: \$6,112,499

Genomic and Epigenomic Factors Associated with Non-Syndromic Congenital Heart Defect Risk:

The major goal of this case-control and case-parental molecular epidemiologic project is to investigate the association between congenital heart defects, including right- and left-sided obstructive heart defects (OHDs), with maternal and infant genetic variants, copy number variants (CNVs), and gene-specific DNA methylation

patterns. To do this, we propose a genome-wide scan of OHDs, taking advantage of recently available genetic tools based on the International HapMap and 1000 Genomes projects. Dr. Hobbs is the PI of the Birth Defects Genomics and Epigenomics Laboratory at Arkansas Children's Hospital Research Institute. She is responsible for overseeing all aspects of the laboratory and for analyzing, interpreting and presenting data. She also coordinates interactions among collaborating investigators, study coordinators, data management and laboratory personnel.

Agency: Arkansas House Bill/State of Arkansas Appropriations

Role: PI

Project Period: 07/01/1996-06/30/2016

Total Costs: \$7,092,023

Arkansas Reproductive Health Monitoring System (ARHMS): ARHMS is a state-wide active public health registry mandated by the state to identify birth defects and other adverse reproductive outcomes. Dr. Hobbs is the Scientific and Medical Director of ARHMS. In this role, she is ultimately responsible for surveillance practices, quality of data ascertainment and analysis, and reporting of findings to researchers, public health officials, and the Arkansas State Legislature.

Past Extramural Research Support

Agency: NICHD

Grant Number: HHSN275200800026C

Role: Co-I

Effort: 10%

Project Period: 09/26/2011- 09/25/2012

Total Costs: \$3,274,271.53

National Children's Study IMS: The Arkansas Study Center (ASC) will lead a collaborative effort with Case Western Reserve University, St. Louis University, University of Miami, University of California Davis, University of North Carolina (two study location sites), and University of Texas Southwest to assist those study centers to transition to the collection and transmission of data through the ASC's current information management system (IMS), the Comprehensive Research Informatics Suite (CRIS). CRIS is a modular, interoperable, non-proprietary, open architecture software suite using international data acquisition and transmission standards.

Agency: NICHD

Grant Number: HHSN2752012000071

Role: Co-I

Budget Period: 09/26/12 – 9/25/14

National Children's Study South Regional Operations Center, Subcontract with Northwestern University

The SROC will be responsible for 10 Study Locations and will facilitate the transition of Study Locations to the ROC, optimize the ROC field operations and data collection and leverage the commitment of numerous investigators with knowledge, skills and expertise that are highly relevant.

Agency: CDC

Grant Number: 5U01DD000491-05

Role: PI

Effort: 15%

Project Period: 12/1/1997-11/30/2013

Total Costs: \$15,691,401

Arkansas Center for Birth Defects Research and Prevention: The Arkansas Center faculty and staff participate in an ongoing population-based multi-site case-control study of

environmental and genetic determinants of nonsyndromic birth defects, the National Birth Defects Prevention Study (NBDPS). Local studies using the infrastructure of the NBDPS are conducted to investigate genomic and epigenomic causes of birth defects.

Agency: NICHD
Role: PI

Grant Number: 5R01HD039054-10
Effort: 19%

Agency: NICHD
Role: PI

Grant Number: HHSN275200800026C
Effort: 14.75%

Project Period: 09/26/2008-09/25/2013

Total Costs: \$14,474,966

Arkansas Center for the National Children's Study (NCS): The NCS is an ongoing multi-site population-based cohort study of environmental, genetic, biological and social factors that contribute to infant and child health. The NCS is a collaborative effort between the U.S. Department of Health and Human Services (including the CDC and the NIH and its National Institute of Child Health and Human Development and National Institute of Environmental Health Sciences) and the U.S. Environmental Protection Agency. This study will enroll and follow a nationally representative sample of approximately 100,000 children born in several U.S. counties. Only 105 of approximately 3,100 counties in the U.S. are included in the NCS; Benton County is the only Arkansas location.

Project Period: 09/01/2000-06/30/2011

Total Costs: \$7,324,681

Genes, Micronutrients and Homeobox-related Malformations/Genetic and Metabolic Determinants of Congenital Heart Defect Risk: The major goal of this case-control and case-parental molecular epidemiologic project is to investigate the association between congenital heart defects and common genetic variants, maternal lifestyle and metabolic biomarkers. Dr. Hobbs is the PI of the Birth Defects Genomics and Epigenomics Laboratory at Arkansas Children's Hospital Research Institute. She is responsible for overseeing all aspects of the laboratory and for analyzing, interpreting and presenting data. She also coordinates interactions among collaborating investigators, study coordinators, data management and laboratory personnel.

Agency: NICHD
Role: PI

Grant Number: 3R01HD039054-08S1
Effort: 19%

Project Period: 06/01/2009-10/31/2010

Total Costs: \$14,209

Genetic and Metabolic Determinants of Congenital Heart Defect Risk Summer Supplement: Administrative Supplement Providing Summer Research Experiences for Students and Science Educators; Funded through the American Recovery and Reinvestment Act of 2009. The activities proposed in this application expand on the previously awarded parent grant. This project will further gene discovery efforts.

Agency: NSF

Role: Co-Investigator (PI: Wang)

Effort: 4%

Project Period: 07/01/2009-06/30/2010

Total Costs: \$39,915

Automated Analysis of Body Fluid Chemistry Using Microfluidics. As Co-PI, Dr. Hobbs provided insight into the requirements of point-of-care detection of three serum biomarkers - folate, homocysteine, and B12.

Agency: CDC
Role: PI

Grant Number: MM-0672-04/04
Effort: 5%

Project Period: 10/01/05-11/30/07

Total Costs: \$22,883

Prevalence of Down syndrome and Spina Bifida: The major goal of this project was to provide public health professionals and health practitioners with mortality data for Down syndrome and spina bifida.

Agency: CDC

Role: Co-Investigator (PI: J Robbins)

Effort: 3% Effort

Project Period: 11/01/06-08/31/07

Total Costs: \$106,459

Health-related Quality of Life and Risky Behavior of Adolescents with Craniofacial Malformations: A Population-Based Multisite Study. This study used the Arkansas Reproductive Health Monitoring System to identify and study approximately 200 children ages 13 to 18 with craniofacial anomalies. Health-related quality of life was assessed among adolescents with craniofacial anomalies and among controls.

Agency: AAMC-CDC Cooperative Agreement Grant Number: MM-0672-04/04

Role: Co-Investigator (PI: J Robbins)

Effort: 10% (In kind)

Project Period: 10/01/03-09/30/06

Total Costs: \$201,153

Using the HCUP Databases to Study Birth Defects: This study used the Healthcare Cost and Utilization Project (HCUP) databases to study newborn hospitalization rates for major birth defects, the impact of birth defects on all pediatric hospitalizations, variation in the surgical management of hypoplastic left heart syndrome, and the impact of folic acid fortification on newborn hospitalizations for birth defects. Dr. Hobbs assisted in project selection and design and offered expert clinical advice on the recognition, coding, and hospital management of infants with birth defects.

Agency: Blue Cross Blue Shield/Blue and You Foundation for a Healthier Arkansas

Role: PI

Effort: 5%

Project Period: 1/01/04-09/30/06

Total Costs: \$175,341

Folic Acid Education Program: The Arkansas Center served as the lead organization of the Arkansas Folic Acid Coalition, which encourages women both to eat foods naturally rich in folate or fortified with folic acid and to take a daily vitamin containing 400 micrograms of folic acid, to improve their chances of having a healthy baby should they become pregnant. In collaboration with the Coalition, the Arkansas Center implemented a Folic Acid Education Program with the goal of reducing the occurrence of folate-preventable birth defects in Arkansas by increasing the knowledge and intake of folic acid among Arkansas women of childbearing age.

Agency: NICHD

Grant Number: 5R01HD038979-03

Role: Co-Investigator (PI: Sherman)

Effort: 5%

Project Period: 06/22/00-05/31/05

Total Costs: \$214,721 (subcontract)

Trisomy 21: Risk Factors for Chromosomal Nondisjunction: This was a multi-site population-based case-control and case-parental study to investigate environmental and genetic determinants of Trisomy 21.

Agency: CDC

Grant Number: U50/CCU616071

Role: PI

Project Period: 1999-2003

Total Costs: \$100,000

Cooperative Agreements for Enhanced State-based Birth Defects Surveillance and Use of Surveillance Data to Guide Prevention and Intervention Programs: The project objectives were: (1) to evaluate and enhance the state birth defects registry (ARHMS), and

(2) to perform an educational project related to folic acid in preventing recurrent neural tube defects (NTDs). The major objective of the educational prevention program was to increase intake of folic acid among women who have had an NTD-affected pregnancy. The target population for the intervention consisted of women residing in Arkansas who had NTD-affected pregnancies. The program educated women about the benefits of folic acid and assisted them in identifying barriers to intake, including access to a physician and concerns about side effects.

Agency: Arkansas Chapter of the March of Dimes

Role: PI

Project Period: 1999-2001

Total Costs: \$5,623

Folic Acid Educational Intervention in the Lower Mississippi River Delta Program

This was an ancillary research study of USDA's Nutrition Intervention Research Initiative (Delta NIRI) in the Lower Mississippi River Delta. The goal was to obtain important information about women of childbearing age and their knowledge about and intake of folic acid. The study aimed to assess the knowledge of the target population of women regarding folate, its benefits, and its availability, analyzing demographic factors such as age and race.

Agency: CDC

Grant Number:U50/CCU611996-03-1

Role: PI

Project Period: 1995-1999

Total Costs: \$184,224

State-based Birth Defects Surveillance Demonstration Project: This project allowed the Arkansas Reproductive Health Monitoring System (AHRMS) to extend active surveillance to all hospitals in Arkansas. Under Dr. Hobbs' leadership, ARHMS changed from a surveillance system that simply stored data in a central location, to an **active public health system that reports findings back to the community and competitively participates in research studies regarding the etiology and impact of birth defects.**

INTRAMURAL RESEARCH SUPPORT

Past Intramural Research Support:

Source: Arkansas Children's Hospital Research Institute/ CUMG

Role: PI

Effort: N/A No Faculty Effort Allowed

Project Period: 12/19/2012 - 6/18/2014

Total Costs: \$40,000

The Role of LINE-1 in Congenital Heart Defects: We believe that variants in LINE-1 are associated with CHD's. This award will allow us to expand our study of CHD's to identify and characterize LINE-1 retrotransposon insertion polymorphisms in a genome-wide study of conotruncal heart defects among case-parental triads and control-maternal dyads from the National Birth Defects Prevention Study (NBDPS).

Source: Arkansas Children's Hospital Research Institute

Role: PI

Effort: N/A No Faculty Effort Allowed

Project Period: 07/01/2013 - 6/30/2014

Total Costs: \$82,478

N/A F&A Matching Account

Source: Arkansas Children's Hospital Research Institute/ CUMG

Role: PI

Project Period: 02/01/2010 – 1/31/2011

Total Costs: \$40,000.00

Validation of Buccal Cell DNA in Genome-Wide Association Studies (GWAS):

The overall goal of the project is to test the viability of buccal cell DNA and whole genome amplified DNA in genome wide association studies. The information obtained from the proposed pilot study will provide conclusions regarding the use of buccal cell DNA in genome wide association studies as we plan for future NIH funding.

Source: Arkansas Children's Hospital Research Institute/ CUMG

Role: PI

Project Period: 10/1/2008-09/30/2009

Total Costs: \$8,245

The Role of Epigenetics in Congenital Heart Defects: This award provided support to a doctoral candidate in the Hobbs Birth Defects Genomics Laboratory. The candidate investigated the role of DNA methylation in the occurrence of congenital heart defects.

Source: Arkansas Children's Hospital Research Institute/ Arkansas Biosciences Institute

Role: PI

Project Period: 12/01/2008-12/31/2009

Total Costs: \$125,000

Congenital Heart Defects and Gene-Specific Methylation: DNA methylation is an important epigenetic mechanism that plays a crucial role in gene regulation during embryogenesis. This study allowed the Hobbs Birth Defects Genomics Laboratory to conduct a pilot study of the association between congenital heart defects and gene-specific methylation.

Source: UAMS College of Medicine Dean's CUMG Research Development Fund

Role: PI

Project Period: 3/01/02-08/31/03

Total Costs: \$18,845

Establishment of a DNA Bank for Congenital Malformations : The purpose of this study was to establish a biorepository of tissues samples, including blood, buccal cell, and cardiac tissue, from infants affected by major birth defects and their parents who received medical care at the University of Arkansas for Medical Sciences (UAMS), and/or Arkansas Children's Hospital (ACH).

Source: Dean's Research Development Fund/Intramural Grant Program

Role: PI

Project Period: 07/01/05-6/30/06

Total Costs: \$40,000

Association Between Congenital Heart Defects and htSNPs in Candidate Genes:

The major goal of this project was to identify association between congenital heart defects and candidate single nucleotide polymorphisms.

Source: ACHRI/ABI Competitive Intramural Grant Program

Role: PI

Project Period: 10/01/05-9/30/06

Total Costs: \$40,000

Congenital Heart Defects and Maternal Biomarkers of Oxidative Stress and

Antioxidant Capacity: The objective of this case-control study was to evaluate the impact of maternal oxidative stress and antioxidant capacity on the development of CHDs.

CHRONOLOGICAL LISTING OF PUBLICATIONS

Peer –Reviewed Publications

1. Ming Li, Jingyun Li, Zihuai He, Qing Lu, John S Witte, Stewart L. Macleod, Charlotte A. Hobbs, Mario A. Cleves. Testing allele transmission for a SNP-Set with a Family-based generalized genetic random field method. *Accepted to Genetic Epidemiology*.
2. Ming Li, Jingyun Li, Changshuai Wei, Qing Lu, Xinyu Tang, Stephen W. Erickson, Stewart L. Macleod, and Charlotte A. Hobbs. A Three-way interaction among maternal and fetal variants contributing to congenital heart defects. *Accepted to Annals of Human Genetics*.
3. Webber DM., MacLeod SL., Bamshad MJ., Shaw GM., Finnell RH., Shete SS., Witte JS., Erickson SW., Murphy LD., Hobbs C. Developments in our understanding of the genetic basis of birth defects. *Birth Defects Res A Clin Mol Teratol* 2015 Aug; 103(8):680-91. PMID: 26033863. PMCID: PMC4537658.
4. Simeone RM, Oster ME, Hobbs CA, Robbins JM, Collins RT, Honein MA. Factors associated with inpatient hospitalizations among patients aged 1 to 64 years with congenital heart defects, Arkansas 2006 to 2011. *Birth Defects Res A Clin Mol Teratol*. 2015 Jul; 103(7): 589-96. Epub 2015 Jul 14. PMID: 26172576. PMCID: PMC4518202.
5. Tang X, Hobbs CA, Cleves MA, Erickson SW, MacLeod SL, Malik S; National Birth Defects Prevention Study. Genetic variation affects congenital heart defect susceptibility in offspring exposed to maternal tobacco use. *Birth Defects Research Part A*. 2015 Oct;103(10):834-842. Epub 2015 Jun 2. PMID: 26033827.
6. Tang X, Cleves MA, Nick TG, Li M, MacLeod SL, Erickson SW, Li J, Shaw GM, Mosley BS, Hobbs CA; National Birth Defects Prevention Study. Obstructive heart defects associated with candidate genes, maternal obesity, and folic acid supplementation. *American Journal of Medical Genetics*. 2015 Jun;167(6):1231-1242. Epub 2015 Apr 2. doi: 10.1002/ajmg.a.36867. PMID: 25846410.
7. Dawson AL, Tinker SC, Jamieson DJ, Hobbs CA, Rasmussen S, Reefhuis J. Epidemiology of twinning in the National Birth Defects Prevention Study, 1997-2007. *Birth Defects Research Part A*. 2015 Feb;103(2):85-99. Epub 2014 Oct 31. doi: 10.1002/bdra.23325. PMID: 25359509.
8. Tang X, Nick TG, Cleves MA, Erickson SW, Li M, Li J, MacLeod SL, Hobbs CA; National Birth Defects Prevention Study. Maternal obesity and tobacco use modify the impact of genetic variants on the occurrence of conotruncal heart defects. *PLOS ONE* 2014 Oct; 9(10): e108903. doi:10.1371/journal.pone.0108903. PMCID: PMC4183535.
9. Miquel-Verges F, Mosley BS, Block AS, Hobbs CA; National Birth Defects Prevention Study. A spectrum project: preterm birth and small for gestational age among infants with birth defects. *Journal of Perinatology*. 2015 Mar;35(3):198-203. Epub 2014 Oct 2. doi:10.1038/jp.2014.180. PMID: 25275696.
10. Li M, Cleves MA, Mallick H, Erickson SW, Tang X, Nick TG, MacLeod SL, Hobbs CA; National Birth Defects Prevention Study. A genetic association study detects haplotypes associated with obstructive heart defects. *Human Genetics*. 2014 Sep; 100(9):1127-1138. Epub 2014 Jun 4. PMCID: PMC4313870.
11. Li M, Erickson SW, Hobbs CA, Li J, Tang X, Nick TG, MacLeod SL, Cleves MA; National Birth Defects Prevention Study. Detecting maternal-fetal genotype interactions associated with conotruncal heart defects: a haplotype-based analysis with penalized logistic regression. *Genetic Epidemiology*. 2014 Apr; 38(3):198-208. Epub 2014 Mar 2. doi: 10.1002/gepi.21793. PMID: 24585533. PMCID: PMC4043210.
12. Hobbs CA, Cleves MA, MacLeod SL, Erickson SW, Tang X, Li J, Li M, Nick T, Malik S; National Birth Defects Prevention Study. Conotruncal heart defects and common variants in maternal and fetal genes in folate, homocysteine, and transsulfuration

- pathways. *Birth Defects Research Part A*. Feb 2014;100(2):116-126. Epub 2014 Feb 18. doi: 10.1002/bdra.232245. PMID: 24535845.
13. Shaw GM, Yang W, Carmichael SL, Vollset SE, Hobbs CA, Lammer EJ, Ueland PM. One-carbon metabolite levels in mid-pregnancy and risks of conotruncal heart defects. *Birth Defects Research Part A*. 2014 Feb;100(2):107-115. Epub 2014 Feb 15. doi: 10.1002/bdra.23224. PMID: 24532477.
 14. Hobbs CA, Chowdhury S, Cleves MA, Erickson SW, MacLeod SL, Shaw GM, Shete SJ, Witte JS, Tycko B. Genetic Epidemiology and Nonsyndromic Structural Birth Defects: From Candidate Genes to Epigenetics. *JAMA Pediatrics*. 2014 Apr;168(4):371-377. Epub 2014 Feb 10. PMID: 24515445. PMCID: PMC3981910.
 15. Ailes EC, Gilboa SM, Riehle-Colarusso TJ, Johnson C, Hobbs CA, Correa A, Honein MA and The National Birth Defects Prevention Study. Prenatal diagnosis of nonsyndromic congenital heart defects. *Prenatal Diagnosis*. 2014 Mar; 34(3):214-222. Epub 2013 Nov 13. doi: 10.1002/pd.4282. PMID: 24222433.
 16. Knecht KR, MacLeod SL, Hobbs CA, Li M, Morrow WR. Gene expression profiling in pediatric heart transplant rejection. *International Journal of Cardiology*. 2013 Oct 12;168(5):5052-5053. doi: 10.1016/j.ijcard.2013.07.211. Epub 2013 Jul 29. PMID: 23972362.
 17. Glidewell J, Reefhuis J, Rasmussen SA, Woomert A, Hobbs CA, Romitti PA, Crider K; National Birth Defects Prevention Study. Factors affecting maternal participation in the genetic component of the National Birth Defects Prevention Study – United States, 1997-2007. *Genetics in Medicine*. 2014 Apr; 16(4):329-337. Epub 2013 Sept 26. doi: 10.1038/gim.2013.143. PMID: 24071796.
 18. Weedn AE, Mosley BA, Cleves MA, Waller DK, Canfield MA, Correa A, Hobbs CA; National Birth Defects Prevention Study. Maternal reporting of prenatal ultrasounds among women in the National Birth Defects Prevention Study. *Birth Defects Research Part A: Clinical and Molecular Teratology*. 2014 Jan; 100(1):4-12. Epub 2013 Oct 5. doi: 10.1002/bdra.23178. PMID: 24123727.
 19. Sotres-Alvarez D, Siega-Riz AM, Herring AH, Carmichael SL, Feldkamp ML, Hobbs CA, Olshan AF; National Birth Defects Prevention Study. Maternal Dietary Patterns are Associated with Risk of Neural Tube and Congenital Heart Defects. *American Journal of Epidemiology*. 2013 Jun 1; 177(11): 1279-1288. Epub 2013 May 2. doi: 10.1093/aje/kws349. PMID: 23639938. PMCID: PMC3664332.
 20. Hunter JE, Allen EG, Shin M, Bean LJ, Correa A, Druschel C, Hobbs CA, O'Leary LA, Romitti PA, Royle MH, Torfs CP, Freeman SB, Sherman SL. The association of low socioeconomic status and the risk of having a child with Down syndrome: a report from the National Down Syndrome Project. *Genetics in Medicine*. 2013 Sep;15(9):698-705. Epub 2013 April 4. doi: 10.1038/gim.2013.34. PMID: 23558253.
 21. Blossom SJ, Rau JL, Best TH, Bornemeier RA, Hobbs CA. Increased maternal cytokine production and congenital heart defects. *Journal of Reproductive Immunology*. 2013 Apr; 97(2): 204-210. Epub 2013 Feb 18. doi: 10.1016/j.jri.2012.12.004. PMID: 23428339.
 22. Hollis ND, Allen EG, Oliver TR, Tinker SW, Druschel C, Hobbs CA, O'Leary LA, Romitti PA, Royle MH, Torfs CP, Freeman SB, Sherman SL, Bean LJH. Preconception Folic Acid Supplementation and Risk for Chromosome 21 Nondisjunction: A Report from the National Down Syndrome Project. *American Journal of Medical Genetics Part A*. 2013 Mar; 161(3): 438-444. Epub 2013 Feb 7. doi: 10.1002/ajmg.a.35796. PMCID: PMC3607196.

23. Canon S, Mosley B, Chipollini J, Purifoy JA, Hobbs CA. Epidemiological Assessment of Hypospadias by Degree of Severity. *The Journal of Urology*. 2012 Dec: 188(6): 2362-2366. Epub 2012 Oct 19. PMID: 23088968.
24. Chowdhury S, Hobbs CA, MacLeod SL, Cleves MA, Melnyk S, James SJ, Hu P. Associations between maternal genotypes and metabolites implicated in congenital heart defects. *Molecular Genetics and Metabolism*. 2012 Nov: 107(3):596-604. Epub 2012 Sep 27. doi: 10.1016/j.ymgme.2012.09.022.
25. Chandler AL, Hobbs CA, Mosley BA, Berry RJ, Canfield MA, Qi YP, Siega-Riz AM, Shaw GM; National Birth Defects Prevention Study. Neural tube defects and maternal intake of micronutrients related to one-carbon metabolism or antioxidant activity. *Birth Defects Research Part A*. 2012 Nov: 94(11): 864-74. Epub 2012 Aug 20. doi: 10.1002/bdra.23068. PMID: 22933447. PMCID: PMC3518275.
26. Erickson SW, MacLeod SL, Hobbs CA. Cheek swabs, SNP chips, and CNVs: Assessing the quality of copy number variant calls generated with subject-collected mail-in buccal brush DNA samples on a high-density genotyping microarray. *BMC Medical Genetics*. 2012 June: 13(1):51. doi: 10.1186/1471-2350-13-51. PMID: 22734463. PMCID: PMC3506514.
27. Correa A, Gilboa SM, Botto LD, Moore CA, Hobbs CA, Cleves MA, Riehle-Colarusso TJ, Waller DK, Reece EA; National Birth Defects Prevention Study. Lack of periconceptional vitamins or supplements that contain folic acid and diabetes mellitus-associated birth defects. *Am J Obstet Gynecol*. 2012 Mar: 206(3): 218.e.1-13. PMID: 22284962.
28. Olshan AF, Hobbs CA, Shaw GM. 2011. Discovery of genetic susceptibility factors for human birth defects: an opportunity for a national agenda. *Am J Med Genet Part A*. 2011 Aug: 155A(8):1794-1797. Epub 2011 Jul 7. PMID: 21739590.
29. Bean LJH, Allen EG, Tinker SW, Hollis ND, Locke AE, Druschel C, Hobbs CA, O'Leary L, Romitti PA, Royle MH, Torfs CP, Dooley KJ, Freeman SB, Sherman SL. Lack of maternal folic acid supplementation is associated with heart defects in Down syndrome: a report from the National Down Syndrome Project. *Birth Defects Research Part A: Clinical and Molecular Teratology*. 2011 Oct: 91(10):885-93. PMCID: PMC3233972.
25. Hobbs CA, MacLeod SL, James SJ, Cleves MA. Congenital heart defects and maternal genetic, metabolic and lifestyle factors. *Birth Defects Research Part A: Clinical and Molecular Teratology*. 2011 Apr; 91(4): 195-203. PMID: 21384532.
26. Cleves MA, Hobbs CA, Zhao W, Krakowiak PA, MacLeod SL; National Birth Defects Prevention Study. Association between selected folate pathway polymorphisms and nonsyndromic limb reduction defects: a case-parental analysis. *Paediatric and Perinatal Epidemiology*. 2011 Mar: 25: 124-134. PMID: 21281325. PMCID: PMC3050483.
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Manuscripts Under Review

None currently

Book Chapters Published

1. Cleves MA, Hobbs CA. Gene Environment Interactions in the Complex Etiology of Congenital Heart Defects. In: *Congenital Heart Defects: From Origin to Treatment.* Diego F. Wyszynski, Adolfo Correa-Villaseñor, and Thomas P. Graham, eds. Oxford University Press, New York 2010.
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Abstracts Published

1. Hobbs CA, Cleves MA, MacLeod S, Erickson S. Conotruncal Heart Defects Associated with SNPs in 61 Genes in Three Folate-Related Candidate Pathways. 2010 Pediatric Academic Societies Meeting. Vancouver, British Columbia, May 1 -3, 2010.
2. Reefhuis J, Honein MA, Schieve L, Correa A, Hobbs CA, Rasmussen SA. Infertility Treatments and the Risk for Neural Tube Defects, Oral Clefts, and Hypospadias. *Proceedings of the Greenwood Genetics Center* 25:120-121, 2006.
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Abstracts Presented

1. Cleves MA, Hobbs CA, MacLeod SL, Erickson SW, Tang X, Li J, Li M, Nick T, Malik S; National Birth Defects Prevention Study. Conotruncal heart defects and common variants in maternal and fetal folate, homocysteine and transsulfuration pathways genes. Poster presented at the 23rd International Genetic Epidemiology Society. Vienna, Austria. August 28-30, 2014.
2. Cleves MA, Li M, Erickson SW, Hobbs CA, MacLeod SL, Tang X, Li J, Nick T; National Birth Defects Prevention Study. Maternal-fetal genotype interactions associated with conotruncal heart defects: a haplotype-based analysis with penalized logistic regression. Poster presented at the 23rd International Genetic Epidemiology Society. Vienna, Austria. August 28-30, 2014
3. Miquel-Verges F, Mosley BS, Block AS, Hobbs CA; National Birth Defects Prevention Study. Prematurity and small for gestational age associated with birth defects, national birth defects prevention study 1997-2007. Poster presented at 6th International Conference on Birth Defects and Disabilities in the Developing World, Cebu, Philippines. November 13, 2013.
4. Tang X, Nick T, Cleves MA, Erickson SW, Li M, Li J, MacLeod SL, Hobbs CA and the National Birth Defects Prevention Study. Conotruncal heart defects and interactions between lifestyle factors and folate and oxidative-stress related genetic variants. Poster presented at Arkansas Biosciences Institute Fall Research Symposium. University of Arkansas for Medical Sciences, Little Rock, AR. October 15, 2013.
5. Ailes EC, Gilboa SM, Johnson C, Riehle-Colarusso T, Hobbs CA, and Honein MA. Maternal report of prenatal diagnosis of congenital heart defects, National Birth Defects Prevention Study, 1997-2005. Poster presentation at Society for Pediatric and Perinatal Epidemiologic Research Conference. Minneapolis, MN. June 26, 2012.
6. Dawson AL, SC Tinker, DJ Jamieson, CA Hobbs, J Reefhuis. Epidemiology of twinning in a population-based sample of live births, 1997-2007. Poster presentation

- at the 17th Annual Maternal and Child Health Epidemiology Conference. New Orleans, LA. December 14-16, 2011.
7. Hobbs CA, MacLeod SL, Karim MA, Randolph CE, Webber DM, Erickson SW and Arkansas National Children's Study Center. DNA Concentration and Purity of Maternal and Cord Blood Samples from Participants in the NCS Initial Vanguard Study and Arkansas DNA Bank for Congenital Malformations. Poster presentation at the Arkansas Biosciences Institute Fall Research Symposium. Little Rock, AR. September 21, 2011.
 8. Hobbs CA, MacLeod SL, Karim MA, Randolph CE, Webber DM, Erickson SW, and Arkansas National Children's Study Center. Maternal and Cord Blood Samples from Participants in the NCS Initial Vanguard Study for Whole-Genome SNP and Methylation Analysis. Poster presentation at the Arkansas Biosciences Institute Fall Research Symposium. Little Rock, AR. September 21, 2011.
 9. Hobbs CA, Robbins J, McElfish P, Casteel M, Harris R, Childers E, Harris K. Innovative Case-Management Model Utilizing Registered Nurses. Poster presentation at the National Children's Study Steering Committee Meeting. Bethesda, MD. August 24-26, 2011.
 10. Hobbs CA, MacLeod SL, Karim MA, Randolph CE, Webber DM, Erickson SW and Arkansas National Children's Study Center. DNA Concentration and Purity of Maternal and Cord Blood Samples from Participants in the NCS Initial Vanguard Study and Arkansas DNA Bank for Congenital Malformations. Poster presentation at the National Children's Study Steering Committee Meeting. Bethesda, MD. August 24-26, 2011.
 11. Hobbs CA, MacLeod SL, Karim MA, Randolph CE, Webber DM, Erickson SW, and Arkansas National Children's Study Center. Maternal and Cord Blood Samples from Participants in the NCS Initial Vanguard Study for Whole-Genome SNP and Methylation Analysis. Poster presentation at the National Children's Study Steering Committee Meeting. Bethesda, MD. August 24-26, 2011.
 12. Erickson SW, Chowdhury S, Cleves MA, MacLeod SL, Hu P, Hobbs CA. A resampling-based approach for controlling type I error in a genomic microarray experiment in which case/control status and chip effect are confounded. Poster presentation at Joint Statistical Meeting. Miami, FL. August 1, 2011.
 13. Chowdhury S, Cleves MA, MacLeod SL, Erickson SW, Zhao W, Hu P, Hobbs CA. Alterations in Maternal DNA Methylation Associated with Congenital Heart Defects. Poster Presentation at American Society of Human Genetics 60th Annual Meeting, Washington, DC. Nov 2-6, 2010.
 14. Erickson SW, Chowdhury S, Cleves MA, MacLeod SL, Hu P, Hobbs CA. Association Testing of Maternal CpG-Site-Specific Methylation and Congenital Heart Defects. Abstract-Poster Presentation, International Genetic Epidemiology Society, 19th Annual Meeting, Boston, MA. Oct 10-12, 2010.
 15. Chowdhury S, Cleves MA, MacLeod SL, Erickson SW, Zhao W, Hu P, Hobbs CA. Alterations in Gene-Specific Methylation and Congenital Heart Defects. Abstract-Poster Presentation, Folic Acid, Vitamin B12, and One Carbon Metabolism Meeting, Carefree, AZ, Aug 1-6, 2010.
 16. Chowdhury S, Cleves MA, MacLeod SL, Zhao W, Hobbs CA. Maternal DNA Hypomethylation, Methionine Pathway Metabolites, Lifestyle Factors and Congenital Heart Defects. Oral Presentation at Teratology Society 50th Annual Meeting, June 26-30, 2010, Louisville, Kentucky.
 17. Hobbs CA, The National Birth Defects Prevention Study: Genetic epidemiological approach emphasizing genitourinary system anomalies. Poster presented at the 7th

- Canadian Congenital Anomalies Surveillance Network's Scientific Meeting. Ottawa, Canada. November 2009.
18. Chowdhury S, Cleves MA, MacLeod SL, Zhao W, Hobbs CA, Maternal DNA Hypomethylation as a Risk Factor for Congenital Heart Defects. College of Medicine, University of Arkansas for Medical Sciences; Arkansas Children's Hospital Research Institute. Poster presented at American Society of Human Genetics Annual Meeting. Honolulu, HI. October 20-25, 2009.
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 21. Hobbs CA, Cleves MA, Karim MA, Zhao W, MacLeod SL. The Association between Congenital Heart Defects and Maternal Folate-related Genetic Polymorphisms and Lifestyle Factors. Poster presented at 49th Annual Teratology Society Meeting. Rio Grande, Puerto Rico. June 2009.
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 23. Chowdhury S, Cleves MA, Karim MA, Randolph CE, MacLeod SL, Zhao W, Hobbs CA. Risk of Congenital Limb Defects and Polymorphisms in Folate Pathway Genes. Poster presented at ABI Fall Research Symposium. Little Rock, AR. 2008.
 24. Burke BL, Robbins JM, Bird TM, Hobbs CA, Nesmith CC, Tilford JM. Trends in Hospitalizations for Neonatal Jaundice and Kernicterus in the United States-1993 to 2004. Poster presented at the Pediatric Academic Societies Meeting in Honolulu, HI. May 2008.
 25. Cleves MA, Malik S, Yang S, Carter T, Hobbs CA. Urinary Tract Infection in Pregnancy as a Risk Factor for Congenital Heart Defects. Poster presented at the American Heart Association. November 2007.
 26. MacLeod SL, Karim MA, Randolph CE, Chowdhury S, Cleves MA, Hobbs CA. Smoking, Maternal Genetic Susceptibility and Congenital Heart Defects. Poster presented at the 6th annual meeting of the International Society for the Prevention of Tobacco Induced Diseases, Translational Approaches to the Prevention of Tobacco Induced Diseases. Little Rock, Arkansas. November 2, 2007.
 27. Karim MA, Cleves MA, MacLeod SL, Hobbs CA. Maternal Genetic Susceptibility, Pro-oxidant Lifestyle Factors and Congenital Heart Defects (CHDs). Poster presented to the 3rd Congress of Asian Society for Pediatric Research. Tokyo, Japan. October 2007.
 28. Cleves MA, Karim MA, MacLeod SL, Hobbs CA. Congenital Hearts, Maternal Genetic Susceptibility and Pro-oxidant Lifestyle Factors. Poster presented at the International Genetic Epidemiology 16th Annual Meeting. York, England, United Kingdom. 8-9 September 2007.

29. Hobbs CA, Palmer KG, Bird TM, Cleves MA, Robbins JM. Birth Defects and Prematurity among Newborns Hospitalized in the United States. Poster presented at the Society for Pediatric Research. Toronto, Canada. May 6, 2007.
30. Bird TM, Hobbs CA, Cleves MA, Tilford JM, Aitken ME, Robbins JM. Newborn Hospitalizations of Infants with Congenital Diaphragmatic Hernia in the U.S., 1993-2003. Poster presented at the National Birth Defects Prevention Network 10th Annual Meeting. San Antonio, Texas. 4-7 February 2007.
31. Robbins JM, Bird TM, Reading JA, Cleves MA, Hobbs CA. Length of Stay, Hospital Charges and Deaths in the Hospital among Newborns with Orofacial clefts in the U.S. Poster presented at the National Birth Defects Prevention Network 10th Annual Meeting. San Antonio, Texas. 4-7 February 2007.
32. Robbins JM, Tyler M, Romitti PA, Druschel C, Austin AA, Kizelnik-Freilich S, Burnett W, Hobbs CA, Damiano P. Parent Perception of Information and Support Following the Birth of an Infant with a Craniofacial Malformation. Poster presented at the National Birth Defects Prevention Network 10th Annual Meeting. San Antonio, Texas. 4-7 February 2007.
33. Smith V, Jenkins M, Sturchio, Gallagher M, Hobbs C; National Birth Defects Prevention Study. Self-Collected Buccal Cell Samples: DNA Yield and Participation Rates. Poster presented at the American Society of Human Genetics Annual Meeting. New Orleans, Louisiana. 9 -13 October 2006.
34. Hobbs CA, Mosley BS, Flowers BS, Smith V, Robbins JM. Reducing the Occurrence of Neural Tube Defects in Arkansas Using Folic Acid Prevention Measures. Poster presented at the 2006 Arkansas Biosciences Institute Conference. Little Rock, Arkansas. October 2006.
35. Robbins JM, Bird TM, Tilford JM, Reading JA, Cleves MA, Aitken ME, Druschel CM, Hobbs CA. Reduction in Newborns Diagnosed with Fetal Alcohol Exposure in the United States, 1993 to 2002. Poster presented at the National Birth Defects Prevention Network 9th Annual Meeting. Washington, D.C. January 30 - February 1, 2006.
36. Robbins JM, Bird TM, Tilford JM, Cleves MA, Hobbs CA. Length of Newborn Hospital Stay, Hospital Charges and In-Hospital Deaths among Major Birth Defects in the United States. Poster presented at the National Birth Defects Prevention Network 9th Annual Meeting. Washington, D.C. January 30 - February 1, 2006.
37. Bird TM, Tilford JM, Cleves MA, Hobbs CA, Robbins JM. National Birth Defect Surveillance Rates: Administrative Data from the Health Care Cost and Utilization Project Compared to Select State Surveillance Systems. Poster presented at the National Birth Defects Prevention Network 9th Annual Meeting. Washington, D.C. January 30- February 1, 2006.
38. Pont J, Bird TM, Gibson JB, Robbins JM, Hobbs CA, Aitken ME. Co-occurring Birth Defects among U.S. Infants with Trisomy 13 and 18. Poster presented at the National Birth Defects Prevention Network 9th Annual Meeting. Washington D.C. January 30 - February 1, 2006.
39. Cleves MA, Hobbs CA, Cleves PA, Malik S, Tilford JM, Bird TM, Robbins JM, Major Birth Defects among Live Born Infants with Down syndrome in the United States: 1993 through 2002. Poster presented at the National Birth Defects Prevention Network 9th Annual Meeting. Washington, D.C. January 30 -February 1, 2006.
40. Hobbs CA, Cleves MA, Malik SA, Parsian A, Zhao W; National Birth Defects Prevention Study. Congenital Heart Defects, Maternal Genetic Susceptibility and Pro-oxidant Lifestyle Factors. Poster presented at the Centers for Research and Prevention Annual Meeting. Atlanta, Georgia. November 2005.

41. Robbins JM, Tilford JM, Bird TM, Cleves MA, Reading A, Thompson JW, Hobbs CA. Newborn Hospitalizations for Birth Defects in the Pre-and Post-Folic Acid Fortification Periods. Poster presented at Academy Health. Boston, Massachusetts. 26-28 June 2005.
42. Robbins JM, Bird TM, Tilford JM, Reading A, Cleves MA, Aitken ME, Druschel CM, Hobbs CA. Infants Diagnosed with Fetal Alcohol Syndrome at Birth in the United States. Poster presented at Academy Health. Boston, Massachusetts. 26-28 June 2005.
43. Bird TM, Tilford JM, Cleves MA, Hobbs CA, Robbins JM. Surveying Birth Defects in States with Limited Surveillance Systems: The Value of Hospital Discharge Data. Poster presented at Academy Health. Boston, Massachusetts. 26- 28 June 2005.
44. Bird TM, Tilford JM, Cleves MA, Hobbs CA, Robbins JM. Surveying Birth Defects in States with Limited Surveillance Systems: The Value of Hospital Discharge Data. Poster presented at Society for Pediatric and Perinatal Epidemiologic Research 17th Annual Meeting. Society Annual Meeting. Toronto, Ontario, Canada. 26-27 June 2005.
45. Hobbs CA, Kirby RS. Casey PH. Spencer TJ. Canino CU. Do Birth Defects Increase the Risk of Failure to Thrive? Presented at Society for Pediatric Research. Washington, DC. May 1997.
46. Hobbs CA, Robbins JM, Shema SJ. Psychosocial Adjustment of Rural Adolescents with Chronic Illness. Presented at the Southern Society for Pediatric Research Meetings. New Orleans, LA. February 1996.
47. Hobbs CA, Pless I, Robbins JM. Emotional Consequences of Communication Disorders in Children. Presented at the Southern Society of Pediatric Research Meetings. New Orleans, LA. February 1995.
48. Cody A, Hobbs CA, Usher R, Kramer M. What's Wrong with the Concept of "Very Low Birth Weight (VLBW)"? Presented at the Society for Pediatric Research Meetings. May 1988.
49. Hobbs CA, Crago M. The Validity of Selective Screening for Audiological Problems in Northern Quebec. Presented at the Annual Conference of the American Speech and Hearing Association. November 1985.

INVITED PRESENTATIONS

International

1. Tang X, Cleves MA, Nick TG, Li M, MacLeod SL, Erickson SW, Li J, Shaw GM, Mosley BM, Hobbs CA, National Birth Defects Prevention Study. Obstructive heart defects associated with candidate genes, maternal obesity, and folic acid supplementation. Oral presentation at *International Clearinghouse for Birth Defects Surveillance and Research 42nd Annual Meeting*, Spoleto, Italy. September 11, 2015.
2. Webber DM, MacLeod SL, Bamshad MJ, Shaw GM, Finnell RH, Shete SS, Witte JS, Erickson SW, Murphy LD, Hobbs CA. Review Article: Developments in our understanding of the genetic basis of birth defects. Oral presentation at *International Clearinghouse for Birth Defects Surveillance and Research 42nd Annual Meeting*, Spoleto, Italy. September 11, 2015.
3. Ailes EC, Gilboa SM, Gill SK, Broussard CS, Crider KS, Berry RJ, Carter TC, Hobbs CA, Reefhuis J, National Birth Defects Prevention Study. Association between antibiotic use and birth defects among women who had urinary tract infections in the first trimester of pregnancy. Poster Spotlight presentation at *30th Annual International*

Conference on Pharmacoepidemiology and Therapeutic Risk Management (ICPE). Taipei, Taiwan. October 24-27, 2014.

4. Hobbs CA. Conotruncal heart defects and interactions between lifestyle factors and genetic variation in folate-related metabolic pathways. Oral presentation at *International Clearinghouse for Birth Defects Surveillance and Research 40th Annual Meeting*, San José, Costa Rica. December 4, 2013.
5. Hobbs CA. Genomic and epigenomic factors associated with nonsyndromic congenital heart defects. Oral presentation at *6th International Conference on Birth Defects and Disabilities in the Developing World*, Cebu, Philippines, November 13, 2013.
6. Hobbs CA. Birth defects surveillance systems in the United States: State and National Opportunities. Oral presentation at *6th International Conference on Birth Defects and Disabilities in the Developing World*, Cebu, Philippines, November 12, 2013.
7. Hobbs CA. Congenital heart defects, folic acid, and maternal dietary patterns: United States National Birth Defects Prevention Study. Oral presentation at *9th International Conference on Homocysteine and One-Carbon Metabolism Meeting*, Dublin, Ireland. September 9, 2013.
8. Mexican Association of Human Genetics, Genomics of Congenital Malformations Symposium. Maternal epigenetic and genetic factors in congenital heart defects. Merida, Yucatan. November 16-19, 2011.
9. Mexican Association of Human Genetics, Genomics of Congenital Malformations Symposium. Congenital heart defects and haplotype tagging SNPs in folate-related pathways. Merida, Yucatan. November 16-19, 2011.
10. 6th Conference on Homocysteine Metabolism World Congress on Hyperhomocysteinemia. Maternal Biomarkers and Birth Defects. Saarbruecken, Germany. June 8, 2007.
11. National Congenital Anomaly Surveillance Workshop, Bureau of Reproductive & Child Health. NTD Surveillance: Challenges and Opportunities. Ottawa, Ontario. May 11, 2000.

National

1. NIEHS Center for Environmental Health, Mailman School of Public Health. Genomic and Epigenomic factors associated with Non-Syndromic Congenital Heart Defect Risk. Columbia University, NYC, NY April 12, 2013
2. National Birth Defects Prevention Network/National Birth Defects Prevention Study Annual Meeting. SNPs in 1-carbon Metabolism and Congenital Heart Defects. Atlanta, GA. February 26, 2013.
3. The Teratology Society 52nd Annual Meeting: Global Perspectives in Teratology. NCS Formative Project: DNA Methylation Study of Archived Blood Samples. Baltimore, MD. June 27, 2012.
4. National Children's Study Steering Committee Meeting. NCS Maternal and Cord Blood Samples: Whole-Genome Arrays and DNA Methylation. Bethesda, MD. August 24-26, 2011.
5. National Children's Study Steering Committee Meeting. Alternative Recruitment Study: Provider-Based Recruitment. Bethesda, MD. August 24-26, 2011.
5. National Center for Toxicological Research. Common Genetic Variants in Congenital Heart Defects. Jefferson, AR. September 9, 2010.

6. The 50th Annual Meeting of The Teratology Society in conjunction with the 23rd Annual education conference Organization of Teratology Information Specialists. National Birth Defects Prevention Study Focus on Over-the-Counter and Prescription Medications. (OTIS). Louisville, KY. June 27, 2010.
7. Vanderbilt University, Grand Rounds. Molecular Epidemiologic Approach to Discover Causes of Nonsyndromic Congenital Heart Defects. Nashville, TN. April 13, 2010.
8. Heartland Genetics and Newborn Screening Collaborative, Birth Defects Surveillance Programs: Research and Primary Prevention. Round Table Discussion: Developing a research and prevention program. Little Rock, Arkansas. September 7, 2009.
9. The 47th Annual Meeting of the Teratology Society. Molecular Epidemiological Tool Kit for Personalized Medicine. Pittsburgh, PA. June 28, 2007.
10. Centers for Birth Defects Research and Prevention Biologics Meeting. How much DNA is enough? Atlanta, Georgia. June 25, 2007.
11. National Institutes of Health. 5th Structural Birth Defects Meeting, Congenital Heart Defects. Linthicum Heights, Maryland. May 7, 2007.
12. National Birth Defects Prevention Network 10th Annual Meeting. Risk for Congenital Heart Defects: A Case Study. San Antonio, Texas. February 5, 2007.
13. Centers for Birth Defects Research and Prevention 2006 Annual Meeting. Genome-wide Association Study Updates. Atlanta, Georgia. November 15, 2006.
14. Centers for Birth Defects Research and Prevention 2006 Annual Meeting. Research Studies Using NBDPS Samples. Atlanta, Georgia. November 15, 2006.
15. National Birth Defects Prevention Network 9th Annual Meeting. Neural Tube Defects and Periconceptional Intake of Micronutrients following Mandatory Folic Acid Fortification. Arlington, Virginia. January 30, 2006.
16. Centers for Birth Defects Research and Prevention 2005 Annual Meeting. Congenital Heart Defects, Genes, and Metabolites. Gaithersburg, Maryland. November 17, 2005.
17. Centers for Birth Defects Research and Prevention 2005 Annual Meeting. Our Investigation of Whole Genome Association. Gaithersburg, Maryland. November 17, 2005.
18. 4th Structural Birth Defects Meeting. How Far We Have Come and How Far We Have Yet to Go...Arlington, Virginia. October 6, 2005.
19. National Birth Defects Prevention Network 8th Annual Meeting. Prenatal Growth Patterns among Infants with Congenital Heart Defects. Scottsdale, Arizona. January 25, 2005.
20. Centers for Birth Defects Research and Prevention 2004 Annual Meeting. NTDs and Micronutrients. San Antonio, Texas. November 16, 2004.
21. Centers for Disease Control and Prevention Birth Defects Regional Meeting. Abdominal Wall Defects. Little Rock, Arkansas. May 13, 2004.
22. Society for Gynecologic Investigation Annual Scientific Meeting. Exploring the Etiology of Complex Birth Defects. Houston, Texas. March 25, 2004.
23. 3rd Structural Birth Defects Meeting. Congenital Heart Defects and Abnormal Maternal Biomarkers of Methionine/Homocysteine Metabolism. St. Louis, Missouri. June 12, 2004.
24. Centers for Birth Defects Research and Prevention Annual Meeting. Integrating a Local Study of Congenital Heart Defects with the National Birth Defects Prevention Study. San Francisco, California. November 15, 2003.
25. National Institutes of Health. First NIH Structural Birth Defects Investigators' Meeting. Genes, Micronutrients and Homeobox-related Malformations. Bethesda, Maryland. July 10, 2001.

26. National Birth Defects Prevention Study. Neural Tube Defects Working Group Meeting. Prevention of Recurrent NTDs in Arkansas. Atlanta, Georgia. May 21, 2001.
27. March of Dimes Board of Trustees. Advocacy Efforts in Birth Defects. New York, New York. September 8, 2000.

State

1. Arkansas Department of Health, Public Grand Rounds. Developments in our understanding of the genetic basis of birth defects. Little Rock, Arkansas. September 4, 2015.
2. Arkansas Department of Health, Public Grand Rounds. Birth Defects and Maternal Exposures. Little Rock, Arkansas. January 17, 2013
3. University of Arkansas for Medical Sciences, Center for Distance Health^{1st} Annual Obesity Symposium. Little Rock, Arkansas. December 11, 2013.
4. Cardiovascular Joint Conference 2012, Arkansas Children's Hospital. Maternal Epigenetic and Genetic Factors in Congenital Heart Defects. April 2, 2012
5. Arkansas Department of Health, County Health Officer Symposium. Public Health Genomics: case studies in neonatal health. Winthrop Rockefeller Institute, Petit Jean, Arkansas. October 16, 2011.
6. University of Arkansas for Medical Sciences, Department of Pediatrics, Peds PLACE. From the Bench to the Crib: Searching for the Cause of Birth Defects. Little Rock, Arkansas. December 4, 2008
7. University of Arkansas for Medical Sciences, Department of Pediatrics, Peds PLACE. Update on Birth Defects: Risks and Protective Factors. Little Rock, Arkansas. December 13, 2007.
8. University of Arkansas for Medical Sciences, Department of Pediatrics, Pediatric Summit. Why a Birth Defects Registry Matters: The Case of Congenital Heart Disease. Little Rock, Arkansas. September 7, 2007.
9. University of Arkansas for Medical Sciences 2007 Perinatal Conference. Neural Tube Defects: Translating Research into Prevention. North Little Rock, Arkansas. January 25, 2007. National Center for Toxicological Research, Food and Drug Administration, and the UAMS Department of Pediatrics Retreat. Birth Defects – A Complex Problem. Little Rock, Arkansas. September 17, 2005.
11. Arkansas Biosciences Institute Fall Research Symposium. Genetic Susceptibility, Biomarkers and Birth Defects. Little Rock, Arkansas. October 28, 2004.
12. Arkansas Children's Hospital Foundation. El Dorado Champions for Kids Celebration. First Baptist Church, El Dorado, Arkansas. February 26, 2004.
13. University of Arkansas for Medical Sciences, College of Medicine, The 5th Annual Meeting of the North American Diabetes-In-Pregnancy Study Group. Collaborative Strategies for Unraveling the Complexity of Birth Defects. Little Rock, Arkansas. May 4, 2003.
14. Women's Foundation of Arkansas, Girls of Promise Conference. Solving the Mystery of Birth Defects. Little Rock, Arkansas. March 22, 2003Arkansas Bioscience Institute Fall Retreat. Congenital Heart Defects: Prevalence Risk Factors and Research in Arkansas. Little Rock, Arkansas. October 24, 2002.
15. Arkansas Pharmacy Association, 120th Annual Convention. Using Folic Acid to Prevent Birth Defects. Little Rock, Arkansas. June 6, 2002.
16. University of Arkansas for Medical Sciences, 18th Annual Conference on Perinatal Care. Why Do We Screen? North Little Rock, Arkansas. November 15, 2001.

17. Arkansas Department of Health Public Health Grand Rounds. Birth Defects Surveillance, Research and Prevention in Arkansas. Little Rock, Arkansas. July 9, 2001.
18. National Center for Toxicological Research. Birth Defects Surveillance, Research, and Prevention in Arkansas. Jefferson, Arkansas. October 30, 2000.
19. Arkansas Perinatal Board. Birth Defects Surveillance, Research, and Prevention in Arkansas. Little Rock, Arkansas. September 29, 2000.
20. Arkansas Health Information Management Association. Panel Speaker. Health Registries. Little Rock, Arkansas. May 4, 2000.

UAMS/ACHRI

1. EBM Journal Club. Kangaroo mother care to reduce morbidity and mortality in low birth weight infants. Arkansas Children's Hospital. Little Rock, Arkansas. May 1, 2012.
2. Arkansas Biosciences Institute Fall Research Symposium. Advances in Genomics, Epigenomics, and National Pediatric Studies. Little Rock, Arkansas. September 21, 2011.
3. Arkansas Department of Health Grand Rounds. Birth Defects and Neonatal Health: Old Questions, New Tools. Little Rock, Arkansas. April 21, 2011.
4. University of Arkansas for Medical Sciences, College of Medicine, Department of Pediatrics Grand Rounds. Birth Defects and Neonatal Health: Old Questions, New Tools. Little Rock, Arkansas. March 15, 2011.
5. University of Arkansas for Medical Sciences, College of Health Related Professions, Department of Genetic Counseling. WIMBA course. Birth Defects Programs: Opportunities for Research and Prevention. Little Rock, Arkansas. February 23, 2011.
6. University of Arkansas for Medical Sciences, Department of Pediatrics, Dean's Research Forum. Framingham for Kids: The National Children's Study. Little Rock, Arkansas. November 25, 2008.
7. University of Arkansas for Medical Sciences, Department of Pediatrics, Dean's Distinguished Faculty Lecture. From the Bench to the Crib: Searching for the Cause of Birth Defects. Little Rock, Arkansas. November 5, 2008.
8. University of Arkansas for Medical Sciences, College of Public Health. Birth Defects and Folic Acid Intake. Little Rock, Arkansas. January 11, 2007.
9. University of Arkansas for Medical Sciences, Department of Obstetrics and Gynecology Grand Rounds. Primary Prevention of Birth Defects: Are We Doing Enough? Little Rock, Arkansas. January 25, 2006.
10. University of Arkansas for Medical Sciences, College of Public Health, Maternal and Child Health Overview. Birth Defects: Surveillance and Intervention. Little Rock, Arkansas. September 28, 2005.
11. University of Arkansas for Medical Sciences, College of Medicine, Department of Pediatrics Grand Rounds. Discovering the Faces of Birth Defects. Little Rock, Arkansas. August 30, 2005.
12. Arkansas Children's Hospital Research Institute. Scientific Advisory Board. Genetic Factors in Birth Defects. Little Rock, Arkansas. November 21, 2003.
13. University of Arkansas for Medical Sciences, Department of Obstetrics and Gynecology Grand Rounds. Prevention in Birth Defects: Is Folic Acid Enough? Little Rock, Arkansas. October 29, 2003.
14. University of Arkansas for Medical Sciences, College of Medicine, Dean's Research Forum. Collaborative Strategies for Unraveling the Complexity of Birth Defects. Little Rock, Arkansas. October 28, 2003.

15. Arkansas Children's Hospital Foundation, Committee for the Future Meeting. Arkansas Center for Birth Defects Research and Prevention Overview. Little Rock, Arkansas. February 28, 2003.
16. University of Arkansas for Medical Sciences, College of Medicine, The Founder's Society Annual Meeting. Solving the Mystery of Birth Defects. November 7, 2002.
17. Arkansas Children's Hospital, Children's Circle of Care Medical Symposium. Solving the Mystery of Birth Defects. Little Rock, Arkansas. October 4, 2002.
18. University of Arkansas for Medical Sciences, College of Public Health, Maternal Child Health Overview. Surveillance and Intervention as it Relates to Birth Defects/Genetic Disorders. Little Rock, Arkansas. August 25, 2002.
19. University of Arkansas for Medical Sciences, College of Medicine, Research Council, Dean's Research Retreat II. Birth Defects and Human Genomics Initiatives on Campus. Little Rock, Arkansas. May 10, 2002.
20. Arkansas Bioscience Institute Board Meeting. Genetic Epidemiology and Congenital Malformations: From the Chromosome to the Crib. Little Rock, Arkansas. April 25, 2002.
21. University of Arkansas for Medical Sciences, Department of Pediatrics Grand Rounds. Genetic Epidemiology of Birth Defects: From the Chromosome to the Crib. Little Rock, Arkansas. February 5, 2002.
22. University of Arkansas for Medical Sciences, College of Medicine, Research Council, Dean's Research Retreat I. Multi-center Grants—Collaboration Off-site. Little Rock, Arkansas. December 16, 2001.
23. Arkansas Children's Hospital Research Institute, Research Conference. The Child Health 21-year Cohort Study. Little Rock, Arkansas. October 18, 2001.
24. Arkansas Children's Hospital Research Institute Scientific Advisory Meeting. Arkansas Center for Birth Defects Research and Prevention. Little Rock, Arkansas. February 9, 2001.
25. Arkansas Center for Health Improvement Grand Rounds. Birth Defects Surveillance, Research and Prevention in Arkansas. Little Rock, Arkansas. November 21, 2000.

CONTINUING EDUCATION

May 6-9, 2001	Genetic Analysis of Complex Human Diseases. Duke University Medical Center, Durham, North Carolina.
December 2-5, 2000	Professional Development Seminar for Junior Women Faculty. Association of American Medical Colleges, Savannah, Georgia.
September 6-16, 2000	Genetic Approaches to Complex Heart, Lung and Blood Diseases. Jackson Laboratories, Bar Harbor, Maine.
Annually 2002-2006	Kaiser-Permanente Pediatric and Neonatal Update Conference. Hawaii.

PROFESSIONAL SERVICES, EDITORIAL ACTIVITIES, AND HONORS

Professional Associations

2000-present	National Teratology Society
1999-present	Society for Pediatric and Perinatal Epidemiologic Research

1997-present Ambulatory Pediatrics Association

1993-present American Academy of Pediatrics

NIH Study Section

July 2007 -June 2011 Invited Member, Infectious, Reproductive, Asthma/Allergy and Pulmonary Conditions (IRAP)

October 2006-present Ad Hoc Member, Infectious, Reproductive, Asthma/Allergy and Pulmonary Conditions (IRAP)

Grant Applications Reviewer

August 2014-present Patient Centered Outcomes Research Institute (PCORI)

National Committees

- Member External Scientific Review Panel – NIH, Eunice Kennedy Shriver National Institute of Child Health and Human Development, Teratology and Birth Defects Branch
- Co-Chair Birth Defects NIH, Working Group for the National Children’s Study
- Chair of Coordinating Council CDC, National Birth Defects Prevention Study
- Member Clinical Translational Sciences Awards – NIH, Core Competency Committee
- Member March of Dimes National Scientific Advisory Committee on Prematurity
- Chair of Data Sharing Committee, National Birth Defects Prevention Study

State-wide Committees

- Arkansas Genetic Services Advisory Committee
- Infant Death Review Committee

UAMS/ACH Committees and Service

January 2013 Member, Clinical Research Committee, University of Arkansas for Medical Sciences, College of Medicine, Department of Pediatrics

2008-present Member, Scientific Advisory Committee, Arkansas Children’s Hospital Research Institute.

2008-present Member, White Paper Research Team, Arkansas Children’s Hospital Research Institute.

2008-present Chair, Clinical Scientist Subcommittee, Guidelines for Promotion and Tenure. University of Arkansas for Medical Sciences, Little Rock, Arkansas.

2008-2010 Board of Directors Member, Arkansas Children’s Hospital Research Institute

2008-present Member UAMS CTSA – Molecular Epidemiology Team

- 2000-present Member, Student House Staff, Women's Faculty Development Committee. University of Arkansas for Medical Sciences, Little Rock, Arkansas.
- 1998-2000 Assistant Medical Director, Arkansas Children's Hospital Child Enrichment Center

UAMS Search Committees

- Member, Search Committee for Dean of College of Medicine
- Member, Search Committee for Director of Bioinformatics, College of Medicine
- Member, Search Committee for Chief of Pediatric Genetics and Genomics, University of Arkansas for Medical Sciences, College of Medicine, Department of Pediatrics
- Chair, Search Committee for Arkansas Children's Hospital Research Institute President, University of Arkansas for Medical Sciences, College of Medicine, Department of Pediatrics
- Member, Search Committee for Clinical Geneticist, University of Arkansas for Medical Sciences, College of Medicine, Department of Pediatrics
- Member, Search Committee for Dean, Arkansas Department of Health, College of Public Health
- Member, Search Committee for Cancer Epidemiologist, Arkansas Department of Health, University of Arkansas for Medical Sciences, College of Public Health
- Member, Search Committee for Chair of the Department of Obstetrics and Gynecology, University of Arkansas for Medical Sciences, College of Medicine

Peer Reviewer

- Quarterly Journal of Medicine
- Journal of Clinical Epidemiology
- Pediatrics
- Journal of Pediatrics
- Birth Defects Research Part A
- American Journal of Clinical Nutrition
- American Journal of Medical Genetics
- American Journal of Obstetrics and Gynecology
- American Journal of Epidemiology
- Archives of Disease in Childhood
- Pediatric and Perinatal Epidemiology

TEACHING AND MENTORING ACTIVITIES

Faculty

- 12/4/2015 Panel Member and Lecturer, Academic Interest Group for Residents, *A Career in Science*, UAMS College of Medicine
- 8/1/2013 Panel Member, Women's Faculty Development Caucus, Faculty Development Seminar Series, *Working Smarter Not Harder*, UAMS College of Medicine

- 4/1996-10/1997 Mentor and Lecturer, Center for Outcomes Research and Effectiveness Scholars Program, UAMS College of Medicine
- 1/1997-8/1997 Faculty Coordinator, Center for Outcomes Research and Effectiveness Scholars Program, UAMS College of Medicine
- 1997-1998 Lead Faculty, Evidenced-Based Medicine Lecture Series for Pediatric Faculty, UAMS College of Medicine

Junior Faculty

- 2000-2004 Mentor, Jill Fascules, M.D., UAMS College of Medicine
- 2002-2013 Mentor, Sadia Malik, M.D., M.P.H., UAMS College of Medicine
- 2008-2013 Primary Mentor, Sadia Malik, M.D., M.P.H., NIH K08 award, "Maternal Smoking, DNA Repair Polymorphisms and the Risk of Septal Heart Defects," submitted July 2007; awarded 7/10/08-6/30/13.
- 2006-present Mentor, Sarah Blossom, Ph.D., UAMS College of Medicine
- 2008-present Mentor, Beth Storm, M.D., UAMS College of Medicine
- 2010-2013 Mentor, Angela Chandler, M.D., UAMS College of Medicine
- 2013-present Mentor, Daka Zakaria, M.D., UAMS College of Medicine

Undergraduate Students

- Summer 2008 Mentor, Stephanie Glenn, Pediatrics Summer Science Program, UAMS College of Medicine
- Summer 2009 Mentor, Emily Coffman, Pediatrics Summer Science Program, UAMS College of Medicine
- Summer 2010 Mentor, Weihan "Jack" Chen, Pediatrics Summer Science Program, UAMS College of Medicine
- Summer 2010 Mentor, Mary Kathryn Allison, Pediatrics Summer Science Program, UAMS College of Medicine
- Summer 2013 Mentor, Ashley Ederle, Pediatrics Summer Science Program, UAMS College of Medicine

Medical Students

- 2001 – 2002 Course Coordinator and Lecturer, Clinical Epidemiology for Medical Students, UAMS College of Medicine
- 2001-2003 Medical Student Honors Research Program Mentor, Sarah Hopkins, UAMS College of Medicine
- 2001-2003 Medical Student Honors Research Program Mentor, Carmen Golden, UAMS College of Medicine

2009-present Medical Student Honors Research Program Mentor, Vanna Kay Gordon, UAMS College of Medicine

Graduate Students

Master's Level

2003 Lecturer, Maternal Child Health Overview, Surveillance and Intervention as it Relates to Birth Defects, UAMS College of Public Health

2004 Lecturer, Maternal Child Health Overview, Surveillance and Intervention as it Relates to Birth Defects, UAMS College of Public Health

2005 Lecturer, Maternal Child Health Overview, Birth Defects: Surveillance and Intervention, UAMS College of Public Health

2007-2009 Mentor, Nicole Rose Master's in Genetic Counseling, UAMS

2010 Mentor, Angela Cicirello Master's in Genetic Counseling, UAMS

Ph.D. Level

2006-2009 Ph.D. Dissertation Committee Member, Sarah White, Department of Pharmacology and Toxicology, UAMS College of Medicine

2007-2012 Primary Advisor, Shimul Chowdhury, Interdisciplinary Biomedical Sciences Program; Clinical Translational Pathway; UAMS College of Medicine and Graduate School.

2008-present Primary Advisor, Bridget Mosley, M. Sc. Interdisciplinary Biomedical Sciences Program; Clinical Translational Pathway; UAMS College of Medicine and Graduate School.

2008-2009 Primary Advisor, Marico Howe, M.Sc. Bioinformatics, University of Arkansas in Little Rock.

2011-present Primary Advisor, Daniel Webber, MS, Interdisciplinary Biomedical Sciences Program (MD/PhD Candidate); Clinical Translational Pathway; UAMS College of Medicine and Graduate School

2013 Primary Advisor, Ethan Gillett, Interdisciplinary Biomedical Sciences Program (MD/PhD Candidate); Clinical Translational Pathway; UAMS College of Medicine and Graduate School

2015-present Primary Advisor, Joseph Levy, Interdisciplinary Biomedical Sciences Program (MD/PhD Candidate); Clinical Translational Pathway in Genomics and Bioinformatics; UAMS College of Medicine and Graduate School

Post-doctoral Trainees

- 2012 Mentor, Christina Pettey. NRSA trainee, UAMS College of Medicine
- 2001 Lecturer, How to Critically Appraise a Medical Article, Department of Pediatrics Residents Journal Club
- 2002 Lecturer, How to Critically Appraise a Medical Article, Department of Pediatrics Residents Journal Club
- 2007-2012 Supervisor of Pediatric Resident during Research Electives, Ashley Weedn, M.D.; Product: peer-reviewed manuscript

Clinical Fellows

- 2007 Lecturer, Insights from Successful Grant Writers? UAMS Department of Pediatrics Fellows Education Lecture
- 2008-2013 Supervisor of Pediatric Clinical Fellows Scholarly Activities, Angela Chandler, M.D.; Primary advisor for scholarly activity during fellowship; Product: peer-reviewed manuscript.
- 2013-present Primary Advisor, David Isum Ward, MD; Primary advisor for scholarly activity during fellowship; UAMS College of Medicine and Graduate School

CIVIC/COMMUNITY LEADERSHIP & ACTIVITIES

Membership

- 1999-present Member, Arkansas Folic Acid Coalition
- 1997-2000 Assistant Medical Director, Arkansas Children's Hospital Child Enrichment Center

Public Witness Testimony

- April 21, 1999 United States House of Representatives Labor/HHS Subcommittee Purpose: To request increased funding for the Birth Defects Prevention Act.

Television Interviews

- 2001 Eye on Arkansas –Promoting public awareness campaign for “Birth Defects Prevention Month” Little Rock Television Stations UPN 38 and KLRT Broadcast date: January 27, 2001.
- 2006 KTHV Channel 11 News at 5 p.m. Live Broadcast Interview. Discussing the latest findings from the Arkansas Reproductive Health Monitoring System. October 4, 2006.
- 2011 “National Children’s Study...Improving the Health of America’s Children.” Family Health Today. By Dr. Janette Nesheiwat. Jones TV Station. Springdale, AR. April 4, 2011.

2012 "Folic Acid Coalition." Channel 7 Live, KATV. January 12, 2012.

Radio Interviews

2001 *Here's to Your Health* segment . Promoting public awareness campaign for "Birth Defects Prevention Month" Little Rock National Public Radio affiliate KUAR twice daily. Broadcast date: January 15-19, 2001.

2006 KARN News Radio Morning Show interview with Neil Gladner. Discussing the award of the competitive NIH renewal grant "Genetic and Metabolic Determinants of Congenital Heart Defect Risk." September 15, 2006.

2011 "The National Children's Study." American Medical Association's ReachMD Radio XM Channel 160. May 5, 2011.

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