

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Darryl B. Hood	POSITION TITLE Professor		
eRA COMMONS USER NAME dbhood			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Johnson C. Smith University, Charlotte, NC	B.S.	1985	Biology/Chemistry
East TN State University, Johnson City, TN	Ph.D.	1990	Biomedical Science
Vanderbilt Univ. School of Med, Nashville, TN	Postdoctoral	1994	Biophys/Mol. Toxicology

A. Positions and Employment

1981-1985 NIGMS MBRS/MARC Honors Undergraduate Research Trainee
 1986-1990 NIGMS MARC Pre-doctoral Fellowship
 1990-1994 NSF Minority (EE Just) Postdoctoral Fellow, Center in Molecular Toxicology, Vanderbilt University School of Medicine, Nashville, TN
 1994-2000 Assistant Professor, Depts. of Family and Preventive Medicine & Pharmacology, Meharry Medical College, Nashville, TN
 2001-7/2005 Associate Professor, Department of Pharmacology, Center for Molecular and Behavioral Neuroscience, Meharry Medical College, Nashville, TN
 7/2005- 5/2008 Associate Professor, Department of Neurobiology and Neurotoxicology, Center for Molecular and Behavioral Neuroscience, Meharry Medical College, Nashville, TN
 2/2008 Adjunct Associate Professor, Department of Pharmacology, The Brain Institute, Vanderbilt University School of Medicine, Nashville, TN
 5/2008-Present Professor with tenure, Department of Neuroscience and Pharmacology, Center for Environmental Health Disparities and Medicine, Meharry Medical College, Nashville, TN
 5/2009-Present Director, Initiative for Environmental Health Disparities and Medicine, Meharry Medical College, Nashville, TN

Other Experience and Professional Memberships

1995-Present Member, Society of Toxicology
 2000-Present Member, Society for Neuroscience
 2001-Present Reviewer, Toxicol. Appl. Pharm.
 2002-Present Reviewer, Tox. Sci.
 2005-2008 Reviewer, NeuroToxicology
 2009- Editorial Board, NeuroToxicology

Honors

2001 Alpha Phi Alpha Fraternity Inc. Merit Award (Chi Chapter); Mentorship Award, School of Graduate Studies and Research, Meharry Medical College
 2001 Chairman, NINDS Health Disparities Working Group on Cognitive and Emotional Health in Children, Environmental and Pharmacological Pollutants.
 2003- Present Appointed to the National Environmental Justice Advisory Council, Environmental Protection Agency, Washington, D. C.
 2007- Present Appointed to CDC-ATSDR Environmental Health, Health Services and Toxicology Research Program Research Advisory Committee
 2008- Present Appointed to NIEHS Superfund Study Section ZES1 LKB-D (S8)
 2009- Present Appointed to NIEHS-Environmental Health Sciences Review Committee (EHSRC)
 2009- Present Appointed to the Environmental Protection Agency's Science Advisory Board (SAB) Exposure and Human Health Committee (EHHC)

B. Selected peer-reviewed publications (in chronological order)

Russell, H.R., and Hood, D.B. (1985) 5-Substituted Indoles via Sodium Indoline 2-Sulfonate: A Re-examination. *Org. Prep. Proced. Int.* **17**, 391-399.

Hood, D.B., and Gettins, P. (1991) A ^1H -NMR Probe for Mobility in the Reactive Center Loops of Serpins: Spin-Echo Studies with Native and Modified Forms of Ovalbumin and Alpha-1-Proteinase Inhibitor. *Biochemistry* **30**, 9054-9060.

Hood, D.B., Gettins, P., and Johnson, D.A. (1993) Reaction of Nitrogen Dioxide with Proteins: Effects on Activity and Immunoreactivity with Alpha-1-Proteinase Inhibitor and Implications for NO_2 Mediated Polypeptide Degradation. *Arch. Biochem. Biophys.* **304**, 17-26.

Hood, D.B., Huntington, J.A. and Gettins, P.G.W. (1994) α_1 -Proteinase Inhibitor Variant T345R. Influence of P14 Residue on Substrate and Inhibitory Pathways. *Biochemistry.* **33**, 8538-8547.

Ramesh, A., Inyang, F., Hood, D.B., and Knuckles, M.E. (2000) Aryl Hydrocarbon Hydrolase activity in F-344 rats subchronically exposed to Benzo(a)pyrene and Fluoranthene through diet. *J. Biochem. & Mol. Tox.* **14**, (3) 155-161.

Townsel, J.G. and Hood, D.B. (2000). A Challenge for the Next Millenium: Eliminating Health Disparities and Achieving Work Force Diversity. *Environ. Health Perspec.* **108**, A438-A439.

Hood, D.B., Nayyar, T., Greenwood, M., Ramesh, A., and Inyang, F. (2000) Modulation in the Developmental Expression Profile of Sp1 Subsequent to Transplacental Exposure of Fetal Rats to Desorbed Benzo(a)pyrene Following Maternal Inhalation. *Inhal. Tox.* **12** 511-535.

Ramesh, A., Inyang, F., Greenwood, M., and Archibong, A. and Hood, D.B. (2001) Toxicokinetics of Inhaled Benzo(a)pyrene ; Plasma and Lung Bioavailability. *Inhal. Tox.* **13**, 533-555.

Ramesh, A., Inyang, F., Hood, D.B., Archibong, A. Knuckles, M., and Nyanda, A. (2001) Metabolism, bioavailability, and toxicokinetics of Benzo (a) pyrene in F-344 rats following oral administration. *Exp. Toxic. Pathol.* **53**, 275-290.

Ramesh, A., Hood, D.B. Inyang, F., Greenwood, M., Archibong, A. Knuckles, M., and Nyanda, A. (2002) Comparative Metabolism, Bioavailability and Toxicokinetics of Benzo(a)pyrene in Rats after Acute Oral, Inhalation, and Intravenous Administration: Implications for Environmental and Occupational Exposures to High Doses. *Polycyclic Aromatic Hydrocarbons.* **22**, 969-980.

Nayyar, T., Zawia, N.H., and Hood, D.B., (2002) Transplacental Effects of 2,3,7,8-Tetrachlorodibenzo-p-dioxin on the Temporal Modulation of Sp1 Developmental Expression Profiles in the Rat Neocortex and Cerebellum. *Exp. Toxic. Pathol.* **53**, 461-468.

Archibong, A. E., Inyang, F., Ramesh, A., Greenwood, M., Nayyar, T., Kopsombut, P., Hood, D.B., and Nyanda, A.M. (2002) Alteration of pregnancy related hormones and fetal survival by inhaled benzo(a)pyrene. *Reprod. Toxicol.* **16**, 801-808.

Wang, Y., Cao, Z., Hood, D.B., and Townsel, J. G. (2003) Construction of Genomic Libraries in Lambda Vectors. In: *Methods in Molecular Biology*, Vol. 235: E.Coli Plasmid Vectors. Edited by N. Cassali and A. Preston. Humana Press Inc. pp 153-168.

Archibong, A. E., Inyang, F., Ramesh, A., Kopsombut, P., Hood, D.B., and Nyanda, A.M. (2003) Disruption of Testicular Steriodogenesis and Epididymal Function by Inhaled Benzo(a)pyrene. *Reprod. Toxicol.* **18**, 325-336.

Wu, J., Ramesh, A., Nayyar, T., Wormley, D., Greenwood, M., and Hood, D, B (2003) Assessment of Metabolites and AhR and CYP1A1 mRNA Expression Subsequent to Prenatal Exposure to Inhaled Benzo(a)pyrene. *Int. J. Dev. Neuroscience* 21, (6) 333-346.

Nayyar, T., Wu, J., and Hood, D.B. (2003) Downregulation of Hippocampal NMDA Receptor Expression By Prenatal Exposure to Dioxin." *Cellular and Molecular Biology* 49 (8) 1357-1362.

Wormley, D, Ramesh, A. and Hood, DB. (2004) Environmental Contaminant-Mixture Effects on CNS Development, Plasticity and Behavior. *Tox. Appl. Pharm.* 197 (1) 49-65.

Ramesh, A., Walker, S., Hood, D.B., Guillen, M., Schneider, K., and Weiland, E. (2004) Bioavailability and Risk Assessment of Orally Ingested Polycyclic Aromatic Hydrocarbons. *International Journal of Toxicology* 23: 301-333.

Wormley, DW, Chirwa, SS, Nayyar, T, Harris, E and Hood, DB (2004) Inhaled Benzo(a)pyrene Impairs Long-Terms Potentiation in the Rat Dentate Gyrus. *Cellular and Molecular Biology*. *Biology* 50, 715-721.

Hood, D.B., Woods, L., Brown, L.A. and Ebner, F.F. (2006) Gestational 2, 3, 7, 8-tetrachlorodibenzo-p-dioxin exposure effects on sensory cortex function. *NeuroToxicology* 27(6): 1032-1042.

Brown, LA., Khoshbouei, H., Goodwin, SJ., Irvin-Wilson, C., Ramesh, A, Sheng, L., McCallister, M., Jiang, GT., Aschner, M., and Hood, DB. (2007) Downregulation of Early Ionotropic Glutamate Receptor Subunit Developmental Expression as a Mechanism for Observed Plasticity Deficits Following Gestational Exposure to Benzo(a)pyrene. *NeuroToxicology* 28(5):965-978.

Harris DL, Hood DB, and Ramesh A. (2008) Vehicle-dependent disposition kinetics of fluoranthene in Fisher-344 rats. *Int. J. Environ. Res. Public Health* 5(1):41-8.

Ramesh A, Inyang F, Lunstra DD, Niaz MS, Kopsombut PM, Jones KM, Hood DB, Hills ER, and Archibong AE. (2008) Alteration of fertility indices in adult F-344 rats by subchronic exposure to inhaled benzo(a)pyrene. *Exp. Toxic. Pathol*, 60(4-5):269-80.

McCallister MM, Maguire M, Ramesh R, Sheng L, Qiao A, Khoshbouei H, Aschner M, Ebner FF and Hood DB (2008) Prenatal Exposure to Benzo(a)pyrene Impairs Later-Life Cortical Neuronal Function. *NeuroToxicology* 29, 846-854.

Ford GD, Ford BD, Steele EC Jr, Gates A, Hood DB, Matthews MA, Mirza S, Macleish PR. (2008) Analysis of transcriptional profiles and functional clustering of global cerebellar gene expression in PCD3J mice. *Biochem Biophys. Res. Commun.* 2008 Dec 12;377(2):556-61. Epub 2008 Oct 16.

Hood, DB, Ramesh, A and Aschner, M (2009) Polycyclic Aromatic Hydrocarbons: Exposure from Emission Products and from Terrorist Attacks on US Targets-Implications for Developmental Central Nervous System Toxicity In: *Handbook of the Toxicology of Chemical Warfare Agents*. Vol. 3; Edited by Ramesh Gupta, Academic Press (London) pp.229-244.

Stokes SC, Hood DB, Zokovitch J, and Close FT (2009) Universal Blueprint for Communicating Risk and Preventing the Citing of a Coal-fired Electrical Power Plant in an Environmental Justice Community. *Journal of Health Care for the Poor and Underserved* (*in press*)

Hood, D.B., Campbell, D., and Levitt, P. (2009) An Emerging Gene-Environment Interaction Model: Autism Spectrum Disorder Phenotypes Resulting from Exposure to Environmental Contaminants During Gestation. In; *Developmental Neurotoxicology Research: Principles, Models, Techniques, Strategies and Mechanisms* Vol. 1; Edited by Pessah, Isaac (Ed) John Wiley and Sons (London) (*in press*)

Harris DL, Washington MK., Hood DB., Roberts LJ II, and Ramesh A (2009). Dietary fat-influenced development of colon neoplasia in *Apc^{Min}* mouse exposed to benzo(a)pyrene. *Toxicologic Pathology (in press)*

Rhoades R, Liu S, Ding X, Maguire M, Ramesh A, Aimin Q, Aschner M, Campbell D, Levitt P and Hood DB. (2009) Prenatal B(a)P Exposure-Induced Modulation of Developmental Expression for Receptor Tyrosine Kinase *MET* and Impairment of Within Session Reversal Learning in a *Cpr* Mouse Model. (*in preparation*)

Elliott V, Chen CK, Garrett A, Goggins S, Cobbs N, Lewis-Polite B, Bruce M. and Hood DB (2009) Validation and Calibration of an Environmental Exposure Health Questionnaire in a Minority Population. *Environ. Health Perspec. (in preparation)*

C. RESEARCH SUPPORT

ACTIVE

1S11ES014156-04 (Hood) 9/1/06-8/30/2011 8.0 cal months

NIEHS

Mechanisms of B(a)P-induced Neurotoxicity

The goal of this ARCH research project is to test mechanistic hypotheses related to the overarching hypothesis that prenatal B(a)P exposure leads to a brain burden of metabolites that result in later-life neuronal and behavioral deficit phenotypes. This project has served as the portal for acquiring the necessary preliminary data leading to the present R01 submission.

OVERLAP: None

Simons Foundation (Levitt) 7/1/2009-6/30/2012 4.0 cal months

Co-Investigator (Hood)

Behavioral and Physiological Consequences of Disrupted MET Signaling

The goal of this study is to determine how gene-environment interactions contribute to the etiology of increasing the risk for autism spectrum disorder.

OVERLAP: None