BIOGRAPHICAL SKETCH

NAME
Aramandla Ramesh

POSITION TITLE
Assistant Professor

eRA COMMONS USER NAME
Aramandla Ramesh

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
Nagarjuna University, India	B.S.	1978	Biology & Chemistry
Annamalai University, India	M.S.	1980	Marine Biology
Annamalai University, India	Ph.D.	1986	Marine Microbiology
Ehime University, Japan	Ph.D.	1992	Environ.Toxicology

A. Positions and Honors

Positions and Employment

1981-1987: Research Fellow, Department of Marine Biology, Annamalai Univ. Parangipettai, India.
1987-1988: Senior Research Fellow, National Inst. of Cholera and Enteric Diseases, Calcutta, India.
1988-1992: Monbusho Research Fellow, Department of Environ. Conservation, Ehime Univ., Matsuyama Japan.
1992-1993: Research Associate, Department of Biology, Fisk University, Nashville, TN.
1993-2000: Research Specialist, Depts. of Fam. & Prev. Medicine, and Pharmacology, Meharry Medical College, Nashville, TN.
2001-2006: Instructor, Department of Pharmacology, Meharry Medical College, Nashville, TN.
2006-till date: Assistant Professor, Department Of Biochemistry & Cancer Biology, Meharry Medical College, Nashville, TN.

Professional Memberships

American Association for Cancer Research
Society of Toxicology
International Society for Polycyclic Aromatic Compounds

Honors

Reviewer for *Polycyclic Aromatic Compounds*, *Toxicological Sciences*, *Environmental Toxicology and Pharmacology*, *Journal of Applied Toxicology*, *Neurotoxicology, Toxicology In vitro, Environmental Pollution, Marine Pollution Bulletin,* and *Marine Environmental Research.*

Topical Editor for *Polycyclic Aromatic Compounds, Toxicology Mechanisms & Methods.*

B. Selected peer-reviewed publications

1. Hilliard AL, **Ramesh A**, Zawia NH (1999). Regional variations in spermine levels in the developing rat brain following exposure to lead. *Brain Res. Bull*., **49**: 349-353.

2. Hilliard AL, **Ramesh A**, Zawia NH (1999). Correlation between lead-induced changes in cerebral ornithine decarboxylase and protein kinase C-activities during development and in cultured PC12 cells. *Int J. Dev. Neurosci*., **17**: 777-785.

3. **Ramesh A**, Inyang F, Hood DB, Knuckles ME (2000). Aryl hydrocarbon hydroxylase activity in F-344 rats subchronically exposed to benzo(a)pyrene and fluoranthene through diet. *J. Biochem. Mol. Toxicol* ., **14**: 155-161.

4. Hood DB, Nayyar T, **Ramesh A**, Greenwood M, 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. *Inhalat*. *Toxicol*., **12**: 511-535.

5. Nyanda AM, Nunes MG, **Ramesh A** (2000). A simple liquid chromatography method for the quantitation of tricyclic antidepressant drugs in human plasma or serum. *Clin Toxicol*., **38**: 631-636.

6. **Ramesh, A**., Greenwood, M., Inyang, F., and Hood, D.B. (2001). Toxicokinetics of inhaled benzo(a)pyrene : plasma and lung bioavailability. *Inhalat. Toxicol*., **13**: 533-553.

7. **Ramesh A**, Inyang F, Hood DB, Archibong AE, Knuckles ME, Nyanda AM (2001). Metabolism, bioavailability, and toxicokinetics of benzo(a)pyrene in F344 rats following oral administration. *Exp. Toxic. Pathol*. **53**: 275-290.

8. Knuckles ME, Inyang F, **Ramesh A** (2001). Acute and subchronic oral toxicity of benzo(a)pyrene in F-344 rats. *Tox. Sci*., **61**: 382-388.

9. **Ramesh A**, Hood DB, Inyang F, Greenwood M, Archibong A, Knuckles ME, Nyanda AM (2002). Comparative metabolism, bioavailability and toxicokinetics of benzo(a)pyrene in rats after acute oral, inhalation, and intravenous administration. *Polycyclic Aromatic Compounds*, **22**: 969-980.

10. Saunders, CR, **Ramesh A**, Shockley DC (2002). Modulation of neurotoxic behavior in F-344 rats by temporal disposition of benzo(a)pyrene. *Toxicol Lett*., **129**: 33-45.

11. Archibong AE, Inyang F, **Ramesh A**, Greenwood M, Nayyar T, Kopsombut P, Hood DB, Nyanda AM (2002). Alteration of pregnancy related hormones and fetal survival in F-344 rats exposed by inhalation to benzo(a)pyrene. *Reprod*. *Toxicol*. **16**: 801-808.

12. Inyang F, **Ramesh A**, Kopsombut P, Niaz MS, Hood DB, Nyanda AM, Archibong AE (2003). Disruption of testicular steroidogenesis and epididymal function by inhaled benzo(a)pyrene. *Reprod*. *Toxicol*. **17**: 527-537.

13. Wu J, **Ramesh A**, Nayyar T, Hood DB (2003). Assessment of metabolites and Ahr and CYP1A1 mRNA expression subsequent to prenatal exposure to inhaled benzo(a)pyrene. *Int J Devl Neuroscience*, **21**: 333-346.

14. Wormley DD, **Ramesh A**, Hood DB (2004). Environmental contaminant-mixture effects on CNS development, plasticity, and behavior. *Toxicol. Appl. Pharmacol*., **197**: 49-65.

15. Knuckles ME, Inyang F, **Ramesh A**. (2004). Acute and subchronic toxicity of fluoranthene in F-344 rats. *Ecotoxicol. Environ. Saf*., **59**: 102-108.

16. **Ramesh A**, Walker SA, Hood DB, Guillen MD, Schneider H, Weyand EH (2004). Bioavailability and risk assessment of orally ingested polycyclic aromatic hydrocarbons. *Int. J. Toxicol.*, **23**: 301-333.

17. **Ramesh A**, Inyang F, Knuckles ME (2004). Modulation of adult rat benzo(a)pyrene metabolism and DNA adduct formation by neonatal diethylstilbestrol exposure. *Exp. Toxic. Pathol*., **56**: 129-138.

18. Walker SA, Whitten LB, Seals GB, Lee WE, Archibong AE, **Ramesh A** (2006).Inter-species comparison of liver and small intestinal microsomal metabolism of fluoranthene. *Food Chem Toxicol*., **44**: 380-387.

19. **Ramesh A**, Knuckles ME (2006). Dose-dependent benzo(a)pyrene [B(a)P]-DNA adduct levels and persistence in F-344 rats following subchronic dietary exposure to B(a)P. *Cancer Letters*, **240**: 268-278.

20. Saunders CR, Das SK, **Ramesh A**, Shockley DC, Mukherjee S (2006). Benzo(a)pyrene-induced acute neurotoxicity in the F-344 rat: role of oxidative stress. *J Appl Toxicol*., **26**: 427-438.

21. Walker SA, Addai AB, Mathis M, **Ramesh A** (2007). Effect of dietary fat on metabolism and DNA adduct formation after acute oral exposure of F-344 rats to fluoranthene. *J. Nutr. Biochem*., **18**: 236-249.

22. Smith TL, Merry ST, Harris DL, Joe Ford J, Ike J, Archibong AE, **Ramesh A** (2007). Species-specific testicular and hepatic microsomal metabolism of benzo(a)pyrene, an ubiquitous toxicant and endocrine disruptor. *Toxicol In Vitro*. **4**: 753-758.

23. Brown LA, Khoshbouei H, Goodwin SJ, Irvin-Wilson C, **Ramesh A**, Sheng L, McCallister M, Jiang GT, Aschner M, Hood DB. (2007). Downregulation of early ionotrophic glutamate receptor subunit developmental expression as a mechanism for observed plasticity deficits following gestational exposure to benzo(a)pyrene. *Neurotoxicology*, **28**: 965-978.

24. Harris DL, Hood DB, **Ramesh A** (2008). Vehicle-dependent disposition of fluoranthene in Fisher-344 rats. *Int J Environ Res Public Health*, **5**: 41-48.

25. Archibong AE, **Ramesh A**, Niaz MS, Brooks CM, Roberson SI, Lunstra DD (2008). Effects of benzo(a)pyrene on intratesticular function in F-344 rats. *Int J Environ Res Public Health*, **5**: 32-40.

26. **Ramesh A**, Inyang F, Lunstra DD, Niaz MS, Kopsombut P, Jones KM, Hood DB, Hills ER, Archibong, AE (2008). Alteration of fertility endpoints in adult male F-344 rats by subchronic exposure to inhaled benzo(a)pyrene. *Exp. Toxic. Pathol*., **60**: 269-280.

27. McCallister NM, Maguire M, **Ramesh A**, Aimin Q, Liu S, Khoshbouei H, Aschner M, Ebner FF, Hood DB. (2008). Prenatal exposure to benzo(a)pyrene impairs later-life cortical neuronal function. *Neurotoxicology*, **29**: 846-854.

28. Walker SA and **Ramesh A** (2009). Relationship between dietary fat type and metabolic fate of fluoranthene in F-344 rats. *Polycyclic Aromatic Compounds*, **29**, 209-227.

29. Wang Z, Yang H, **Ramesh A**, Roberts, II LJ, Zhou L, Lin X, Zhao Y, Guo Z (2009). Overexpression of Cu/Zn-superoxide dismutase and/or catalase accelerates benzo(a)pyrene detoxification by upregulation of the aryl hydrocarbon receptor in mouse endothelial cells. *Free Radic Biol Med.,* **47**:1221-1229.

30. Harris DL, Huderson AC, Niaz MS, Ford JJ, Archibong AE, **Ramesh A**. (2009). Comparative metabolism of benzo(a)pyrene by ovarian microsomes of various species. *Environ Toxicol*. PMID: 19051262.

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

C. Research Support:

Ongoing Research Support

1S11ES014156-01A1 (PI: Hood) 07/01/06-06/30/11
ARCH at Meharry Medical College
NIH/NIEHS

Environmental Toxicology Core Facility (Co-Director: Ramesh)

The major goals of this facility are to provide a centralized service for exposure of cells, whole animals and

chemical analysis of relevant endpoints such as PAH metabolites and marker enzymes of toxicological interest.

1RO3CA130112-01 (PI: Ramesh) 08/20/07-07/31/10
NIH/NCI

Chemoprevention of colon cancer via neonatal imprinting

The major goals of this project were to investigate whether neonatal exposure to resveratrol has a chemopreventive effect towards delaying or preventing the onset of benzo(a)pyrene-induced colorectal carcinogenesis.

1R01ES014472 (PI: Guo; Collaborator: Ramesh) 10/01/06-9/30/10
NIH/NIEHS

Effect of antioxidant enzymes on benzo(a)pyrene-induced atherogenesis

The major goals of this project are to determine whether overexpression of Cu/Zn-superoxide dismutase and catalase reduces benzo(a)pyrene-induced atherogenesis.

Pending Research Support

1RO1CA142845-01A1 (PI: Ramesh) 04/01/10-03/31/14
NIH/NCI

Mechanisms for benzo(a)pyrene-induced colon cancer exacerbation by dietary fat

The major goals of this project are to unravel the biochemical and molecular mechanisms in the synergistic interaction between dietary fat and benzo(a)pyrene in inducing colon carcinogenesis.

Completed Research Support

1S11ES014156-01A1 (PI: Hood) 07/01/06-06/30/09
NIH/NIEHS
ARCH Pilot Project (PI: Ramesh)

Dietaryf fat potentiation of benzo(a)pyrene-induced colon cancer

The major goals of this project are to investigate the contribution of fat type in diet to increased risk of colon cancer from benzo(a)pyrene exposure.

G12RR003032 (PI: Rice) 09/01/05-08/31/09
NIH/NCRR
Meharry RCMI Program in Women's Health Research
Sub-Project (PI: Archibong; Co-I: Ramesh)

Influence of benzo(a)pyrene on ovarian function

The major goals of this sub-project are to investigate the effect of benzo(a)pyrene exposure on plasma concentrations of steroids, their regulatory factors, ovarian function, luteal maintenance and pre-implantation development.