BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Kaphalia, Bhupendra S.	Associate Professor
eRA COMMONS USER NAME kaphalia	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Agra University, Agra, India	B.S.	1973	Zoology, Botany, Chem.
Kumaun University, Nainital, India	M.S.	1975	Chemistry
Kumaun University, Nainital, India	Ph.D.	1984	Chemistry (Toxicology)

A. Positions and Honors

Positions

2002-pres Associate Professor, Department of Pathology, UTMB, Galveston, Texas
1998-2002 Assistant Professor, Department of Pathology, UTMB, Galveston, Texas
1988-1998 Instructor, Department of Pathology, UTMB, Galveston, Texas
1985-1988 Postdoctoral Fellow, Department of Pathology, UTMB, Galveston, Texas
1978-1985 Scientific Assistant, Industrial Toxicology Research Center, Lucknow, India
1977-1978 Junior Research Fellow, Council of Scientific and Industrial Research, New Delhi, India
1976-1977 Jr. Res. Fellow, World Health Organization, Industrial Toxicology Res. Center, Lucknow, India

Other Experience and Professional Memberships

Professional Memberships

The Metabolomics Society; Society of Toxicology; American Chemical Society; International Society for the Study of Xenobiotics

Editorial Board Member

Alcohol; Journal of Toxicology and Environmental Health, Part B: Critical Reviews; Journal of Experimental Zoology, India; Toxicology Letters (past)

Journal Reviewer

Alcohol Alcoholism; Comparative Biochemistry and Physiology, Molecular and Cellular Biochemistry; Clinical Chemistry and Enzymology; Clinica Chimica Acta; Drug Metabolism & Disposition; Journal of Lipid Research; Lipids; Psychiatry Research; Toxicology and Applied Pharmacology; Toxicology Mechanisms and Methods

Study Section Ad hoc Member

AA-1 Study Section, NIH/NIAAA, 2004 – present; Terry Fox Fund for Cancer Research, United Arab Emirates.

B. Peer-reviewed publications (selected from a total of 80)

1. **Kaphalia BS,** Ansari GAS. Rapid Chromatographic analysis of fatty acid anilides suspected of causing toxic oil syndrome. *J Anal Toxicol.* 1991;14:90-94.
2. **Kaphalia BS.** Fatty acid conjugates of chlorinated phenols: Synthesis, structural elucidation and high performance liquid chromatographic analysis. *J Chromatogr.* 1991;537:85-92.
3. Kanz MF, Kaphalia L, **Kaphalia BS,** Ramagnoli E, Ansari GAS. Methylene dianiline: Metabolism and its effects on biliary functions. *Toxicol Appl Pharmacol.* 1992;117:88-97.
4. **Kaphalia BS,** Ansari GAS. Covalent binding of ethylene dibromide and its metabolites to albumin. *Toxicol Lett.* 1992;62:221-230.
5. **Kaphalia BS,** Khan MF, Boor PJ, Ansari GAS. Toxic response to repeated oral administration of 2-chloroethyl linoleate in rats. *Res Commun Chem Path Pharmacol.* 1992;76:209-222.
6. **Kaphalia BS**, Bhat HK, Khan MF, Ansari GAS. Tissue distribution of monochloroacetic and its binding to albumin in rats. *Toxicol Indust Hlth.* 1992;8:53-61.
7. **Kaphalia BS,** Khan MF, Ansari GAS. Reduced activities of serum lactate dehydrogenase and aminotransferases due to an oral administration of 2-chloroethylinoleate in rats. *Bull Environ Contam Toxicol.* 1992;48:308-312.

8. Ansari GAS, **Kaphalia BS,** Khan MF. Fatty acid conjugates of xenobiotics. *Toxicol Lett.* 1995;75:1-17.
9. Zeng FY, **Kaphalia BS,** Ansari GAS, Weigel PH. Fatty acylation of the rat asialoglycoprotein receptor: The three subunits from active receptors contain covalently bound palmitate and stearate. *J Biol Chem.* 1995;270:21382-21387.
10. **Kaphalia BS,** Carr JB, Ansari GAS. Increased endobiotic fatty acid methyl esters following exposure to methanol. *Fundam Appl Toxicol.* 1995;28:264-273.
11. **Kaphalia BS,** Khan MF, Carroll RM, Aronson J, Ansari GAS. Subchronic toxicity of 2-chloroethanol and 2-bromo-ethanol in rats. *Res Commun Pharmacol Toxicol.* 1996;1:173-186.
12. **Kaphalia BS,** Ghanayem BI, Ansari GAS. Nonoxidation metabolism of 2-butoxyethanol via fatty acid conjugation in Fischer 344 rats. *J Toxicol Environ Hlth.* 1996;49:463-479.
13. **Kaphalia BS,** Fritz RR, Ansari GAS. Purification and characterization of rat liver microsomal fatty acid ethyl and 2-chloroethyl ester synthase and their relationship with carboxylesterase (pI 6.1). *Chem Res Toxicol.* 1997;10:211-218.
14. **Kaphalia BS,** Ansari GAS. Single step thin layer chromatographic method for quantitation of enzymatic formation of fatty acid anlides. *J Chromatogr B.* 1998;705:269-275.
15. **Kaphalia BS,** Khan MF, Ansari GAS. Fatty acid anilides: *In vivo* formation and relevance to toxic oil syndrome. *J Biochem Mol Toxicol.* 1999;13:269-277.
16. **Kaphalia BS,** Green SM, Ansari GAS. Fatty acid ethyl and methyl ester synthases and fatty acid anilide synthase in HepG2 and AR42J cells: Interrelationship and inhibition by tri-o-tolyl phosphate. *Toxicol Appl Pharmacol.* 1999;159:134-141.
17. **Kaphalia BS,** Ansari GAS. Purification and characterization of rat hepatic microsomal low molecular weight ethyl ester synthase and their relationship to carboxylesterases. *J Biochem Mol Toxicol.* 2001;15:165-171.
18. **Kaphalia BS**, Ansari GAS. Fatty acid ethyl esters and ethanol-induced pancreatitis. *Cell Mol Biol.* 2001;47:OL173-OL179.
19. Mericle KA, **Kaphalia, BS**, Ansari, GAS. Differential inhibition of hepatic, pancreatic and plasma fatty acid ethyl ester synthase by tri-O-tolylphosphate in rats. *Toxicol Appl Pharmacol.* 2002;179:119-125.
20. **Kaphalia BS**, Ansari GAS. Purification and characterization of rat pancreatic fatty acid ethyl ester synthase and its structural and functional relationship to pancreatic cholesterol esterase. *J Biochem Mol Toxicol.* 2003;17;338-245.
21. **Kaphalia BS**, Mericle KA, Ansari GAS. Mechanism of Differential Inhibition of Hepatic and Pancreatic Fatty Acid Ethyl Ester Synthase by Inhibitors of Serine-Esterases: In Vitro and Cell Culture Studies. *Toxicol Appl Pharmacol.* 2004;200:7-15.
22. Mericle KA, **Kaphalia BS,** Ansari GAS. Modulation of fatty acid methyl esters in rats pretreated with tri-O-tolyl phosphate. *J Toxicol Environ Hlth, Part A.* 2004;67; 583-593.
23. **Kaphalia BS**, Ping Cai, M. Firoze, Khan, Okorodudu, A.O. and Ansari GAS. Fatty acid ethyl esters in alcoholics; markers of alcohol abuse and alcoholism. *Alcohol*. 2004;34:151-158.
24. Cai P, **Kaphalia BS** and Ansari GAS. Methyl palmitate: Inhibitor of phagocytosis in rat primary Kupffer cells. *Toxicololgy*. 2005; 210:197-204.
25. Khan SH, **Kaphalia BS** and Ansari GAS. In vivo conjugation of ethanolamine with fatty acids by rat liver subcellular fractions. *J Toxicol Environ Health.* 2005; 68:667-676.
26. Wu H, Cai P, Clemens DL, Jerrells TR, Ansari, GAS, **Kaphalia BS**. Metabolic basis of ethanol-induced cytotoxicity in stable and recombinant HepG2 cells: Role of nonoxidative metabolism. *Toxicol. Appl. Pharmacol*. 216, 238-247, 2006.
27. Bhopale K, Wu H, Boor PJ, Popav, VL, Ansari GAS, and **Kaphalia BS**. Metabolic basis of ethanol-induced hepatic and pancreatic toxicity in hepatic alcohol dehydrogenase-deficient deer mice. *Alcohol* 39, 179-188, 2006.
28. Wu H, Bhopale K, Ansari GAS, and **Kaphalia BS**. Ethanol-induced cytotoxicity in rat pancreatic acinar AR42J cells: Role of fatty acid ethyl esters. *Alcohol Alcohol*. 43, 1-8, 2008.
29. Cai P, Konig R, Boor, PJ, Kondraganti S, **Kaphalia BS**, Khan MF, Ansari GAS. Chronic exposure to Trichloroethene causes early onset of SLE-like disease in female MRL +/+ mice. Toxicol. Appl. Pharmacol. 228:68-75, 2008.
30. Kaphalia BS, Bhopale KK, Wu H, Kondraganti S, Dhananjaya N, Boor PJ and Ansari GAS. An association among increased nonoxidative metabolism of ethanol, activation of pancreatic endoplasmic reticulum-stress and pancreatic injury in hepatic alcohol-dehydrogenase-deficient deer mice: A dose-dependent study. (To be submitted).

C. Research Support

Ongoing Research Support

NIH, NIEHS, RO1-ES11584 (P.I. Ansari) 07/01/03-06/31/08 (NCE)
"Mechanism(s) of TCE-Mediated Autoimmunity"
To elucidate the mechanism(s) of trichloroethene (TCE) and its metabolite medicated autoimmune responses.
Direct cost- $225,000

NIH, NIAAA, R01 AA016364 (P.I. Ansari) 09/30/07-08/31/12
"Hepatic Steatosis and the Lipid Metabolome"
To elucidate the mechanism of hepatic steatosis by lipid metabolomic, proteomic and genomic approaches. Studies are planned to identify early changes in hepatic lipid metabolome that lead to steatosis.
Direct cost- $225,000.

NIH, NS11255-32A2 (PPG) (P.I. Chung) 04/01/08/-03/31/13
"Peripheral and Central sensitization in Pain," Kaphalia is Director of the Core B (ROS-Analytical Core).
This project will assess the role reactive oxygen species (ROS) to understand the mechanisms of peripheral and central pain. The focus of this PPG is to study the cause and effect relationship of ROS and assess the role of ROS-derived products as signaling molecule in delineating the mechanism of pain. Direct cost- $863,158 .

Research Projects Completed During the Last 3 Years

NIH, NIAAA, RO1 AA13171 (P.I. Kaphalia) 08/01/02–07/31/08
"Fatty Acid Ethyl Esters in Ethanol-induced Pancreatitis"
Experiments are planned to test the hypothesis that increased formation of fatty acid ethyl esters (FAEEs, esters of ethanol with endogenesis fatty acids) in the pancreas during alcohol abuse is a triggering event in ethanol-induced pancreatitis, and that FAEEs and enzyme(s) responsible for the synthesis of FAEEs could be early markers of pancreatic injury.
Direct cost- $175,000

NIH, NIEHS, RO1 ES04815 (P.I. Ansari) 06/01/00-05/31/06
"Lipid Conjugates of Xenobiotics"
To test the hypothesis that a number of FAEES have distinct structural and kinetic properties with varying preferences towards xenobiotic substrates. These FAEES are present in tissues and catalyze the formation of fatty acid conjugates with xenobiotics or their metabolites, resulting in altered distribution and retention of xenobiotics and contributing to toxicity which is often different from that of the parent compound.
Direct cost- $175,000.