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## BIOGRAPHICAL SKETCH

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NAME Ratna B Ray, PhD.	POSITION TITLE Professor		
eRA COMMONS USER NAME ratnaray			
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
University of Calcutta, Calcutta, India	B.S.	1978	Physiology, chemistry,
University of Calcutta, Calcutta, India	M.S.	1980	Physiology
University of Calcutta, Calcutta, India	Ph.D.	1985	Physiology
University of Alabama at Birmingham, Alabama	Post-Doc	1990	Mol & Cell Biol

### PERSONAL STATEMENT

#### PROFESSIONAL POSITIONS

1991-1992 Research Scientist, International Center for Genetic Engineering Biotechnology (UNIDO), New Delhi, India  
1992-1993 Research Assistant Professor, Department of internal medicine and Biochemistry, University of Alabama at Birmingham, Birmingham, Alabama  
1993-1997 Assistant Research Professor, Department of Internal Medicine and Institute for Molecular Virology, Saint Louis University Health Sciences Center, St. Louis, Missouri  
1997-2000 Assistant Professor, Departments of Pathology, Internal Medicine, Pediatric Research Institute and Institute for Molecular Virology, Saint Louis University Health Sciences Center, St. Louis, Missouri  
2000-2005 Associate Professor, Department of Pathology, Saint Louis University, St. Louis, Missouri  
2001-present Member, Saint Louis University Liver Center  
2002-Present Member, Saint Louis University Cancer Center  
2005-present Professor, Department of Pathology, Saint Louis University, St. Louis, Missouri

#### HONORS, AWARDS and SERVICE

Henry Christian Memorial Award from American Federation of Cancer Research  
Ad Hoc Reviewer for NIH Hepatobiliary Pathophysiology Study Section  
Ad Hoc Reviewer for NIH Drug Discovery and Molecular Pharmacology Study Section  
Ad Hoc Reviewer for NIH Tumor Cell Biology Study Section  
Ad Hoc Reviewer for DOD breast and prostate cancer study sections  
Member of NIH Drug Discovery and Molecular Pharmacology Study Section  
Ad Hoc Reviewer for NIH ZRG1 IDM-R (2) SEP, ZDK1 GRB-R (03), CRSF, ZRG IMM, and ZRG1 OBT-M 50  
Ad Hoc Reviewer for NIH MONC Study Section

#### MEMBERSHIPS

American Society for Virology  
American Society for Microbiology  
American Association for Cancer Research

## SELECTED PUBLICATIONS (of 89)

1. **Ray RB**, Thomas S, Miller DM. Mouse fibroblasts transformed with the human c-myc gene express a high level of mRNA but a low level of c-myc protein and are non-tumorigenic in nude mice. *Oncogene* 4:593-600, 1989.
2. **Ray RB**, Miller DM. Cloning and characterization of a human c-myc promoter binding protein. *Mol Cell Biol* 11:2154-2161, 1991.
3. **Ray RB**. Induction of cell death in murine fibroblasts by a c-myc promoter binding protein. *Cell Growth & Differ*, 6:1089-1096, 1995.
4. **Ray RB**, Steele R, Seftor E, Hendrix M. Human breast carcinoma cells transfected with the gene encoding c-myc promoter binding protein (MBP-1) shows tumor suppression in nude mice. *Cancer Research*, 55:3747-3751. 1995.
5. Majumder M, Steele R, Ghosh AK, Zhou XY, Thornburg L, Ray R, Phillips NJ, **Ray RB**. Expression of hepatitis C virus non-structural 5A protein in the liver of transgenic mice. *FEBS Lett.* 555: 528-32, 2003.
6. Ghosh AK, Steele R, **Ray RB**. c-myc Promoter-binding protein 1 (MBP-1) regulates prostate cancer cell growth by inhibiting MAPK pathway. *J Biol Chem.* 280:14325-30, 2005.
7. Ghosh AK, Steele R, **Ray RB**. Knockdown of MBP-1 in human prostate cancer cells delays cell cycle progression. *J. Biol. Chem.* 281(33):23652-7, 2006.
8. Ghosh AK, Steele R, Ryerse J, **Ray RB**. Tumor-suppressive effects of MBP-1 in non-small cell lung cancer cells. *Cancer Res.* 66(24):11907-12, 2006.
9. Ghosh AK, Kanda T, Steele R, **Ray RB**. Knockdown of MBP-1 in human foreskin fibroblasts induces p53-p21 dependent senescence. *PLoS ONE*, 2008, 3:e3384. [PMCID: PMC2557062]
10. Kanda T, Raychoudhuri A, Steele R, Sagartz JE, West C, **Ray RB**. MBP-1 inhibits breast cancer growth and metastasis in immunocompetent mice. *Cancer Res.* 69(24):9354-9, 2009, PMCID: (in process)
11. **Ray RB**, Raychoudhuri A, Steele R, Nerurkar P. Bitter melon (*Momordica charantia*) extract inhibits breast cancer cell proliferation by modulating cell cycle regulatory genes and promotes apoptosis. *Cancer Res.* 70(5):1925-31, 2010, PMCID: (in process)
12. Steele R, Mott J, **Ray RB**. MBP-1 upregulates miR-29b that represses Mcl-1, collagens, and matrix-matrixmetalloproteinase-2 in prostate cancer cells. *Genes & Cancer* 1(4): 381-387, 2010, [PMCID: PMC2908325]
13. Nerurkar P, **Ray RB**. Bitter melon: antagonist to cancer. *Pharm Res.* 27 :1049-53, 2010. PMCID: (in process)
14. Ru P, Steele R, Nerurkar P, Phillips NJ, **Ray RB**. Bitter melon extract impairs prostate cancer cell cycle progression and delays prostatic intraepithelial neoplasia in TRAMP model. *Cancer Prev Res (Phila).* 4(12):2122-30, 2011 PMCID: (in process)
15. Ru P, Steele R, Hsueh EC, **Ray RB**. Anti-miR-203 Upregulates SOCS3 Expression in Breast Cancer Cells and Enhances Cisplatin Chemosensitivity. *Genes & Cancer* 2 (7):720-7, 2011. PMCID: (in process)

### Ongoing Research Support:

Title: Bitter melon and chemoprevention of prostate cancer

Principal Investigator: Ratna Ray

Support agency: NIH/NCI

Level of funding: 1R21CA137424

Overlap: None

The major goal of this proposal is examine the chemopreventive role of bitter melon extract.

Title: Innate immunity and hepatitis C virus infection

Principal Investigator: Ratna B. Ray

Support agency: NIDDK/NIH

Level of funding: R01 DK081817

Overlap: None

The major goal of this proposal is to understand why HCV induces autophagy and modulates innate immunity.