

DR. S. A. Raju Bagadi

Contact details

Scientist - 'C'
Room No. 210, Tumor Biology Laboratory,
National Institute of Pathology (ICMR),
Safdarjung Hospital Campus, Post Box No.4909
New Delhi-110029, India
Telephone No. +911126169791
+91-1126198402-06, Ext.309
E mail: bsaraju@icmr.org.in, bsaraju@rediffmail.com



Research Interests:

Broad Areas of Research:

- ◆ **Biology and Biomarker Discovery of Breast Cancer**
- ◆ **Epigenetics of Breast Cancer**
- ◆ **Role of Non-coding RNAs in Breast Cancer**

Publications

Previous Affiliations & Scientific contributions

The main focus of our laboratory is to understand molecular pathogenesis of breast cancer, particularly to identify key molecules and epigenetic alterations that are involved during the process of transformation of normal mammary cells into cancer cells. Particularly, we are interested in understanding the molecular mechanisms involved in breast tumorigenesis in young patients (<40 years). In this direction we have established two cell lines from early onset breast tumors (<40 years) of Indian origin. Further, we identified gene expression and methylation profiles associated with early onset (<40 years of age) and late onset (>55 years of age) breast cancers to understand the key pathways and genes involved in breast tumorigenesis in young patients. We would like to explore the mechanical aspects of these genes identified by the genomics approaches.

Cancer stem cells are recently shown to be responsible for development of resistance to chemotherapeutic drugs rendering tumors difficult for treatment with these drugs; hence it is interesting to explore the underlying mechanisms; As part of one of our ongoing projects we are analysing unique molecular signatures associated with cancer stem cells, to identify molecules that are responsible for the stem cell features exhibited by cancer cells with the hope that it will enable us to identify molecular targets to design effective therapeutic approaches to fight against breast cancer.



Publications:

1. Karnati HK, Panigrahi M, Shaik NA, Greig NH, Bagadi SA, Kamal MA, Kapalayayi N. Down regulated expression of Claudin-1 and Claudin-5 and up regulation of β -catenin: association with human glioma progression. *CNS Neurol Disord DrugTargets*. 2014;13(8):1413-26.
2. Pandrangi SL, Raju Bagadi SA, Sinha NK, Kumar M, Dada R, Lakhanpal M, Soni A, Malvia S, Simon S, Chintamani C, Mohil RS, Bhatnagar D, Saxena S. Establishment and characterization of two primary breast cancer cell lines from young Indian breast cancer patients: mutation analysis. *Cancer Cell Int*. 2014 Feb 5;14(1):14.
3. Yadav DS, Devi TR, Ihsan R, Mishra AK, Kaushal M, Chauhan PS, Bagadi SA, Sharma J, Zamoawia E, Verma Y, Nandkumar A, Saxena S, Kapur S. Polymorphisms of glutathione-S-transferase genes and the risk of aerodigestive tract cancers in the Northeast Indian population. *Genet Test Mol Biomarkers*. 2010 Oct;14(5):715-23.
4. Kaushal M, Mishra AK, Raju BS, Ihsan R, Chakraborty A, Sharma J, Zomawia E, Verma Y, Kataki A, Kapur S, Saxena S. Betel quid chewing as an environmental risk factor for breast cancer. *Mutat Res*. 2010 Dec 21;703(2):143-8.
5. Bagadi SA, Prasad CP, Kaur J, Srivastava A, Prashad R, Gupta SD, Ralhan R. Clinical significance of promoter hypermethylation of RASSF1A, RAR-beta2, BRCA1 and HOXA5 in breast cancers of Indian patients. *Life Sci*. 2008 Jun 20;82(25-26):1288-92.
6. Keimling M, Kaur J, Bagadi SA, Kreienberg R, Wiesmüller L, Ralhan R. A sensitive test for the detection of specific DSB repair defects in primary cells from breast cancer specimens. *Int J Cancer*. 2008 Aug 1;123(3):730-6.
7. Raju Bagadi SA, Kaur J, Ralhan R. Establishment and characterisation of two novel breast cancer cell lines. *Cell Biol Int*. 2008 Jan;32(1):55-65.
8. Bagadi SA, Prasad CP, Srivastava A, Prashad R, Gupta SD, Ralhan R. Frequent loss of Dab2 protein and infrequent promoter hypermethylation in breast cancer. *Breast Cancer Res Treat*. 2007 Sep;104(3):277-86.

[On PubMed](#)



Previous Affiliations:

M.Sc. Biotechnology: 1997-1999, Andhra University, Visakhapatnam-03, India

Ph.D.: 2000-2005, Department of Biochemistry, All India Institute of Medical Sciences (AIIMS), New Delhi-29, India

ACSBI -UICC fellow/ Post Doctoral fellow: 2010, Biochemistry and Molecular Genetics, University of Virginia School of Medicine, USA

Scientific Contributions:

- * *Established 5 breast cancer cell lines of Indian origin, representing various breast cancer types*
 - **Two sporadic breast cancer cell lines represent early onset (<40 years) breast cancers (Established at National Institute of Pathology)*
 - **Two familial cell lines and one sporadic breast cancer cell lines , familial breast cancer cell lines represent BRCAx/non-BRCA1/2 group breast cancers (Bagadi SAR et.al.2008, Established at AIIMS)*
- * *First time demonstrated loss of Dab2 and its epigenetic silencing in breast cancer*