Complete bio-data of Dr. Sharmila Bapat

Bapat Sharmila A., Ph.D.	**Group Leader, NCCS, Pune**		
INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
Pune University, INDIA	B.Sc.	1985	Microbiology
Pune University, INDIA	M.Sc.	1987	Microbiology
NCL, Pune University, INDIA	Ph.D.	1992	Biochemistry

Academic Appointments

2019-2021	Appointed Member of the Council, Indian Academy of Sciences, Bangalore
2019-2022	Appointed Member of the Board of Governors, National Institute of Technology, A.P
2018- present	External Member, Board of Studies, Homi Bhabha National Insitute (HBNI University)
2016-2018	Invited Member, AACR (American Association of Cancer Research) Advisory Subcomittee on India
2019-2021	Elected member of Executive Committee of the Indian Association of Cancer Research (***IACR***)
2018	Member, Rapid Action Plan and Scientific Advisory Committee of the National Institute of Immunology, New Delhi
2012-2015	Elected member of Executive Committee of the Indian Association of Cancer Research (***IACR***)
2012-2014	Member, Task Force on Basic Biology of the Department of Biotechnology
2011-2016	Member of Board of Studies in Stem Cells & Regenerative Medicine, D.Y.Patil University, Kolhapur
2010-2011	Member, Rapid Action Plan and Scientific Advisory Committee of the National Institute of Immunology, New Delhi
2009-2015	Member of Board of Studies in Stem Cells & Tissue Engineering, Panjab University, Chandigarh
2009-2012	Elected member of Executive Committee of the Indian Association of Cancer Research (***IACR***)
2009-2012	Member, Task Force on Chronic Disease Biology of the Department of Biotechnology
2007- 2010	Member, Task Force for screening research grants under the call for Indo-German forum of the Indian Council for Medical Research
2001-present	Scientist, National Centre for Cell Science, Pune, INDIA
1997-2000	Faculty in Microbiology, Pune University, INDIA
1994-1996	Industrial Experience, Global Environmental Engineering Ltd. Pune, INDIA
1992-1993	Post-Doctoral Fellow, National Facility for Animal Cell and Tissue Culture, Pune, INDIA

Honors and Awards

2020	Miltenyi Biotech Project Grants 2020
2017-2020	TATA Innovation Fellowship from the Department of Biotechnology
2016	Outreach Lecturing Fund (OLF) Award of the USIEF for travel, lecturing and developing linkages with US Universities
2016	$10,000 virtual cloud credits from the Seven Bridges Cancer Genomics Cloud for continued use of their platforms after return to India on completion of sabbatical
2015	Elected Fellow of the Indian Academy of Sciences, Bangalore
2015	Elected Fellow of the Maharashtra Academy of Sciences, Pune

2015	Group Award from The Cytometry Society, India, for novel applications of flow cytometry
2015	Fullbright (FNAPE) Fellowship
2010	Elected Fellow of the National Academy of Sciences, Allahabad
2010	R.M. Tiwari Research Oration Award
2008	National Woman Bioscientist Award from the Department of Biotechnology
2008	Prem Nath Wahi Award from the Indian Council for Medical Research
2006	Department of Biotechnology Overseas Fellowship availed at Indiana University, Bloomington, Indiana, US
2005	Department of Biotechnology International Travel Award
2000	CSIR Pool Scientist Award
1997-2000	CSIR Research Associate Fellowship
1992-1993	Post-doctoral Fellowship at National Facility for Animal Cell and Tissue Culture
1987-92	Council of Scientific and Industrial Research Fellowship
1980-87	Maharashtra State Fellowship for undergraduate and post-graduate education and research

Professional Memberships

1. Elected Member of the Guha Research Conference
2. Active Member of American Association of Cancer Research (AACR).
3. Life Member of Indian Association of Cancer Research (IACR).
4. Life Member of Indian Society of Cell Biology (ISCB).
5. Member- International Epigenetics Society
6. Life Member of Indian Women Scientists Association.
7. Life Member of International Federation of Head and Neck Oncology (Honorary Membership)
8. Editorial Board Member of the journals –Journal of Ovarian Research , Scientific Reports

Publications

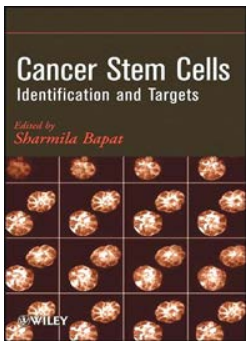
a. *Publications – as Group Leader at NCCS*

1. Kalra et al. A Monoclonal Antibody against Annexin A2 targets stem and progenitor cell fractions in tumors. Revised version submitted for review to **Translational Oncology**.
2. Shivalingappa PKM, Sharma V, Shiras A, Bapat SA. RNA Binding Motif 47 (RBM47): Emerging Roles in Vertebrate Development, RNA Editing and Cancer. **Mol. Cell. Biochem**. 2021 Sep doi: 10.1007/s11010-021-04256-5.
3. Varankar SS, More MM, Abraham A, Kumar B, Narayanan NJ, Jolly MK, Bapat SA. Functional Balance between TCF21-Slug defines phenotypic plasticity and migratory modalities in high-grade serous ovarian cancer cell lines; **Carcinogenesis**. 2020 Jun 17;41(4):515-526.
4. Sagar S Varankar, Sharmila A Bapat. Uncoupling Traditional Functionalities of Metastasis: The Parting of Ways with Real-Time Assays. **J Clin Med.** 2019 Jun 28;8(7). pii: E941.
5. Kamble SC, Sen A, Dhake RD, Joshi AN, Midha D, Bapat SA. Clinical Stratification of High-Grade Ovarian Serous Carcinoma Using a Panel of Six Biomarkers. **J Clin Med**. 2019 Mar 8;8(3). pii: E330. doi: 10.3390/jcm8030330.
6. Jolly MK, Somarelli JA, Sheth M, Biddle A, Tripathi SC, Armstrong AJ, Hanash SM, Bapat SA, Rangarajan A, Levine H. Hybrid epithelial/mesenchymal phenotypes promote metastasis and therapy resistance across carcinomas. **Pharmacol Ther.** 2019 Feb;194:161-184.

7. Varankar SS, Bapat SA. Migratory Metrics of Wound Healing: A Quantification Approach for *in vitro* Scratch Assays. Front Oncol. 2018 Dec 18;8:633. doi: 10.3389/fonc.2018.00633. eCollection 2018.
8. Naik RR, Luo T, Kohandel M, Bapat SA. Tumor deconstruction as a tool for advanced drug screening and repositioning. **Pharmacol Res.** 111, 2016; pp: 815-9.
9. Naik RR, Gardi NL, Bapat SA. Elucidation of molecular and functional heterogeneity through differential expression network analyses of discrete tumor subsets. **Scientific Reports.** 6, 2016; pp: 25261.
10. Naik RR, Singh AK, Mali AM, Khirade MF, Bapat SA. A tumor deconstruction platform identifies definitive end-points in the evaluation of drug responses, **Oncogene** 35, 2016; pp:727-37.
11. Khirade MF, Lal G, Bapat SA., Derivation of a fifteen gene prognostic panel for six cancers., **Scientific Reports.** 5, 2015; pp: 13248.
12. Kumar B, Uppuladinne MVN, Jani V, Sonavane U, Joshi RR, Bapat SA. Auto-regulation of SNAI2 mediates its activity during epithelial to mesenchymal transition. **Biochimica et Biophysica Acta (BBA) - Gene Regulatory Mechanisms,** 1849, 2015; pp. 1209-1219.
13. Singh AK, Chandra N, Bapat SA. Evaluation of epigenetic drug targeting of heterogenous tumor cell fractions using potential biomarkers of response in ovarian cancer. **Clinical Cancer Research,** 21, 2015; pp: 5151–63.
14. Dong Y, Batra J, Kamal A, Bapat S, Clements JA. Transforming the Future of Treatment for Ovarian Cancer. **Clinical Experimental Pharmacology,** 4, 2014; pp:2-9
15. Gardi NL, Deshpande TU, Kamble SC, Budhe SR, Bapat SA. Discrete molecular classes of ovarian cancer suggestive of unique mechanisms of transformation and metastases. **Clinical Cancer Research,** 2014,20:87-99.
16. Kalra RS, Bapat SA. Expression Proteomics Predicts Loss of RXR-γ during Progression of Epithelial Ovarian Cancer. **PLoS One.** 8, 2013; pp:e70398.
17. Kalra RS, Bapat SA. Enhanced levels of double-strand DNA break repair proteins protect ovarian cancer cells against genotoxic stress-induced apoptosis. **J Ovarian Cancer.** 6, 2013; pp 66.
18. Krishnaprasad H, Khadilkar A, Sharma N, Khadilkar V, Pfäffle R, Blum W, Bapat S. Entire prophet of Pit-1 (PROP-1) gene deletion in an Indian girl with combined pituitary hormone deficiencies. **J Pediatr Endocr Met** 2011; 24(7-8):579–580.
19. Bapat SA, Jin V, Berry N, Balch C, Sharma N, Kurrey N, Zhang S, Fang F, Lan X, Li M, Kennedy B, Bigsby RM, Huang T H-M, Nephew KP. Multivalent Epigenetic Marks Confer Microenvironment-Responsive Epigenetic Plasticity to Ovarian Cancer Cells. **Epigenetics** 2010 November 16; 5(8):1-14.
20. Bapat SA. Ovarian Cancer Stem Cells. **Reproduction**. 2010 July; 140(1):33-41.
21. Bapat SA, Krishnan A, Ghanate AD, Kusumbe AP, Kalra RS. Gene Expression - Protein Interaction Systems Network Modeling identifies Transformation Associated Molecules and Pathways in Ovarian Cancer. **Cancer Research.** 2010 Jun 15;70(12):4809-19.
22. Sharma N, Mali AM, Bapat SA. Spectrum of CREBBP mutations in Indian Rubinstein-Taybi Syndrome patients. **J. Biosci.** 2010 Jun;35(2):187-202.
23. Sharma N, Jadhav SP, Bapat SA. CREBBP Re-Arrangements affect Protein Function and lead to aberrant Neuronal Differentiation. **Differentiation** 2010 Apr-Jun;79(4-5):218-31.
24. Bapat S Modulation of Gene Expression in Ovarian Cancer by Active and Repressive Histone Marks. **Epigenomics** 2010; 2(1), 39–51.
25. Kusumbe AP, Bapat SA. Cancer stem cells and aneuploid populations within developing tumors are the major determinants of tumor dormancy. **Cancer Research.** 2009;69(24):9245-53.
26. Kurrey NK, Jalgaonkar SP, Joglekar AV, Ghanate AD, Chaskar PD, Doiphode RY, Bapat SA. Snail and Slug mediate radio- and chemo-resistance by antagonizing p53-mediated apoptosis and acquiring a stem-like phenotype in ovarian cancer cells. **Stem Cells**. 2009 27(9):2059-2068.

27. Kusumbe AP, Mali AM, Bapat SA. CD133 expressing Stem Cells associated with Ovarian Metastases establish an Endothelial Hierarchy and contribute to Tumor Vasculature. **Stem Cells.** 2009. Mar;27(3):498-508.
28. Berry NB, Bapat SA. Ovarian cancer plasticity and epigenomics in the acquisition of a stem-like phenotype. **J Ovarian Res.** 2008 Nov 24;1:8.
29. Wani AA, Rangrez AY, Kumar H, Bapat SA, Suresh CG, Barnabas S, Patole MS, Shouche YS. Analysis of reactive oxygen species and antioxidant defenses in complex I deficient patients revealed a specific increase in superoxide dismutase activity. **Free Radic Res.** 2008; 42:415-27.
30. Wani AA, Ahanger SH, Bapat SA, Rangrez AY, Hingankar N, Suresh CG, Barnabas S, Patole MS, Shouche YS. Analysis of mitochondrial DNA sequences in childhood encephalomyopathies reveals new disease-associated variants. **PLoS One.** 2007 26; 2:e942.
31. Balch C, Nephew KP, Huang TH, Bapat SA. Epigenetic "bivalently marked" process of cancer stem cell-driven tumorigenesis. **Bioessays**. 2007; 29:842-5.
32. Bapat SA. Evolution of cancer stem cells. **Semin Cancer Biol.** 2007; 17:204-13.
33. Wani AA, Sharma N, Shouche YS, Bapat SA. Nuclear-mitochondrial genomic profiling reveals a pattern of evolution in epithelial ovarian tumor stem cells. **Oncogene**. 2006 12; 25:6336-44.
34. Bapat SA, Mishra GC. Stem cell pharmacogenomics: a reality check on stem cell therapy. **Curr Opin Mol Ther.** 2005; 7:551-6.
35. Bapat SA, Mali AM, Koppikar CB, Kurrey NK. Stem and progenitor-like cells contribute to the aggressive behavior of human epithelial ovarian cancer. **Cancer Research.** 2005; 65:3025-9.
36. Kurrey NK, K A, Bapat SA. Snail and Slug are major determinants of ovarian cancer invasiveness at the transcription level. **Gynecol Oncol.** 2005; 97:155-65.
37. Bapat S, Galande S. Association by guilt: identification of DLX5 as a target for MeCP2 provides a molecular link between genomic imprinting and Rett syndrome. **Bioessays**. 2005; 27:676-80.
38. Bapat SA, Mishra GC. Stem cell pharmacogenomics. **Curr Top Med Chem.** 2004; 4:1371-83.

b. Book - Edited a book – "Cancer Stem Cells" released in November, 2008 (Publishers: John Wiley & Sons, Hoboken).



Sharmila A. Bapat (Editor) Hardcover

1. Edition - November 2008
276 Pages, Hardcover - Professional Book -
ISBN-10: 0-470-12201-3
ISBN-13: 978-0-470-12201-3

John Wiley & Sons

c. Book Chapters

1. **Bapat SA**, Mishra GC. Pharmacogenomics Based Emerging Drug Discovery Strategies. In: *Advances in Biochemistry and Biotechnology*;

Volume 1 Pages 245-280; 2005, Chakraborty C (Ed), Daya Publishing House, India.

2. **Sharmila Bapat**, Anne Collins, Michael Dean, Kenneth Nephew, Suraiya Rasheed. Cancer Stem Cells (CSCs): Similarities and Variation of the Theme of Normal Stem Cells In : *Cancer Stem Cells: Identification and targets;* Pages 1-26; 2008, Bapat SA (Ed), John Wiley & Sons (Publishers)
3. **Sharmila Bapat**. Leukemic Stem Cells. In: *Cancer Stem Cells: Identification and targets;* Pages 1-26; 2008, Bapat SA (Ed), John Wiley & Sons (Publishers).
4. Anjali Kusumbe, **Sharmila Bapat**. Ovarian Stem Cell Biology and the emergence of Ovarian Cancer Stem Cells. In: *Cancer Stem Cells: Identification and targets;* Pages 1-26; 2008, Bapat SA (Ed), John Wiley & Sons (Publishers).
5. **Bapat SA**. Stem Cells in Human Epithelial Ovarian Cancer. In: Stem cells: organogenesis and cancer, S.R. Singh & P.K. Mishra(Eds.), Research Signpost/ Transworld Research Network (Publishers), 2010.
6. Balla MM, Kusumbe AP, Vemuganti GK, **Bapat SA**. Cancer Stem Cells. In: Regenerative Medicine, 2011, Gustav Steinhoff (Ed.), Springer Verlag Publishers.
7. **Bapat SA.** Epigenetic Regulation of Cancer Stem Cells. In: Epigenetics: Development And Disease, 2011, Tapas. Kundu (Ed). Springer Verlag Publishers.
8. **Bapat S.A.** (2013) Epigenetic Regulation of Cancer Stem Cell Gene Expression. In: Kundu T. (eds) Epigenetics: Development and Disease. Subcellular Biochemistry, vol 61. Springer, Dordrecht
9. **Bapat SA.** Cancer Stem Cells. In: Regenerative Medicine, 2016, Gustav Steinhoff (Ed.), Springer Verlag Publishers.
10. **Bapat SA.** (2016) Cancer Stem Cells: Perspectives Beyond Immunophenotypes and Markers. In: Steinhoff G. (eds) Regenerative Medicine - from Protocol to Patient. Springer, Cham.
11. Panda Suchismita, Shiras A, **Bapat SA**. Long Noncoding RNAs: Insights into their roles in normal and Cancer Stem Cells, In: Cancer and Non-coding RNAs, 2016, Chakrabarti (Ed.), Elsevier Publishers.
12. Suresh A., Naik R.R., **Bapat S.A.** (2017) Role of Cancer Stem Cells in Oral Cancer. In: Kuriakose M. (eds) Contemporary Oral Oncology, Springer, Cham.
13. **Bapat SA.** (2018) Tumor-Initiating Cells in Ovarian Cancer. In: Katabuchi H., Ohba T., Motohara T. (eds) Cell Biology of the Ovary. Springer, Singapore.
14. Kalra Rajkumar S, **Bapat SA (2019).** Proteomics to Predict Loss of RXR-γ During Progression of Epithelial Ovarian Cancer. In: Ray Swapan K. (eds) Methods Molecular Biology. 978-1-4939-9584-4.

d. Patents

1. US Patent # 20170067901 (Granted) **–** "A Tumor Deconstruction Platform for the analysis of Intra-Tumor Heterogeneity".
2. Indian Patent # 358225 (Granted) - "A Tumor Deconstruction Platform for the analysis of Intra-Tumor Heterogeneity".
3. PCT: PCT/IB2015/050358 application filed "Identification, quantification, monitoring and analysis of intra-tumor heterogeneity".
4. Indian Patent Granted – patent # 374150 - "A Monoclonal Antibody Targeting the Tumor Regenerative Hierarchy".