

Statement of research achievements, if any, on which any award has already been received by the applicant. Please also upload brief citation(s) on the research work(s) for which the applicant has already received the award(s) (not to exceed 2000 words):

The present nomination has been made for the contribution of Dr. Sharmila Avadhut Bapat in the field of “**Epithelial to Mesenchymal Transition (EMT)**” for which she has not received any awards as yet.

Besides EMT, the nominee has also contributed significantly in the areas of “Cancer Stem Cells” and “Tumor Heterogeneity” which do not overlap with the scope of this nomination, as is seen from her entire list of publications (included in the cv of the nominee).

Earlier awards received by the nominee include –

(i) ICMR - Dr. Prem Nath Wahi Award 2007

Citation: The significance of isolation and identification of ovarian cancer stem cells lies in the identification of the quiescent, regenerative ovarian cancer stem cells that are responsible for initiating and maintaining the disease, despite therapeutic intervention. Her further contributions leading to the resolution of tumor heterogeneity as a derivative of CSC hierarchies, CSC-recruited endothelial stem cells and CSC-niche interactions that generate aneuploidy, are widely appreciated. Integrating classical approaches with contemporary bioinformatics- and systems- based analysis she works on elucidation of transcriptional network, serous ovarian cancer-specific gene signatures and biomarkers that together identify the novel connectivity(s) between molecular determinatives and functional pathways in cellular subsets. This outlines a paradigm shift towards defining specific next-generation drug-targets.

(ii) National Women Bioscience Award 2008 (Young Category) received from the Department of Biotechnology

Citation: Dr. Sharmila Bapat has to her credit, the first report on the isolation and identification of ovarian cancer stem cells. She has demonstrated that such cells constitute a small subset within the tumor and are responsible for initiating and maintaining the disease, despite therapeutic intervention. This finding is particularly promising for developing newer approaches in cancer therapy. The National Women Bioscientist Award 2008 (Young Category) is conferred on Dr. Sharmila A. Bapat for her significant contributions in the field of ovarian cancer stem cells.

(iii) TCS (The Cytometry Society) Award – for *Application of flow cytometry for novel applications reported in a recent publication (Basic Research)*. – No citation

Brief Description: We undertook resolution of intra-tumor heterogeneity through the application of multi-colour flow cytometry. This leads to an improved understanding of the coexistence of several cell types within a single tumor vis-à-vis cancer stem cell hierarchies, genetically unstable populations and differentially cycling cells. Such cellular portraits are also useful in analysis of regenerative potential in post-therapy residual tumors during evaluation of efficacies of putative drug candidates.

(iv) Shri Ramniklal J. Kinarivala Cancer Oration Award, Gujarat Cancer Society –

Scroll of Honour : Your research work has been oriented to elucidation of cellular and molecular pathways underlying ovarian cancer. The committee is aware of you national and international collaborations in the field. You are the receipt of a short-term ICMR-DHR international fellowship for senior Indian scientists, TATA Innovation Fellowship, Fulbright Nehru Academic and Professional Excellence (FNAPE) Fellowship, Cytometry (TCS) Award, R.M.Tiwari Research Oration award, National Women Bioscience award. Your publications and citations have earned you a notable position at the national and international levels and in several committees. We feel this is an appreciable engagement towards human services which will inspire generations to come. It is this achievement of excellence that we wish to recognize with this oration award.



Sharmila A. Bapat, Ph.D
NCCS