Signed statement from the applicant to the effect that the research work under reference has not been given any award in the past.

[I] <u>This research work has not been recognized through any awards</u>; however, I have earlier received the following awards –

(i) 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.

(ii) 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.

(iii) TCS (The Cytometry Society) Award – for ***Development of a novel platform for precision assessment of drug responses***. Our earlier strengths and expertise in the field of CSC biology were used to overcome the limitations of present day drug discovery wherein significant regression of tumor volumes deems a candidate molecule to be effective. We realized that failure of a large number of drugs in clinical trials despite earlier promising effects arise from an inability to assess their capability to target cellular heterogeneity in tumors. Thus resolution of intra-tumor heterogeneity in terms of understanding coexistence of all cellular constituents was developed. Such cellular portraits are also useful in analysis of regenerative potential in post-therapy residual tumors during evaluation of efficacies of putative drug candidates. Modulation of the frequencies and behavior of each fraction provides definitive end-points in evaluating drug responses. Proof-of principle for this technology and its evaluation has been carried using several known clinical drugs and candidate molecules individually and in combination. More recently this has received recognition for its novel and creative use of flow cytometry through selection for the *'The Cytometry Society (TCS) 2015 Award'.* An Indian and PCT Patent application for the same have also been recently filed and is now awaiting opportunities for commercialization

[II] The applicant should also indicate the extent of the contribution of others associated with the research and he/she should clearly identify his/her achievements (not to exceed 500 words)

In all the published research reports, the concept was visualized by and developed by me. Experimentation was also performed under my supervision using resources and grants provide to me by my institute (National Centre for Cell Science). With the help of other contributing colleagues, I have analysed the data and contributed to the manuscript and patent drafting and revisions. All final drafts are approved and submitted by me and I hold the sole responsibility of the validity of the statements.

PhD Scholars who have conducted the research have received their doctorate degree with me as the sole guide. Project staff has benefitted from the training imparted during the research and have also been recognized as co-authors on the reports that they have contributed through their research efforts

Sabapal
30/9/21

Dr. Sharmila Bapat
NCCS, Pune