

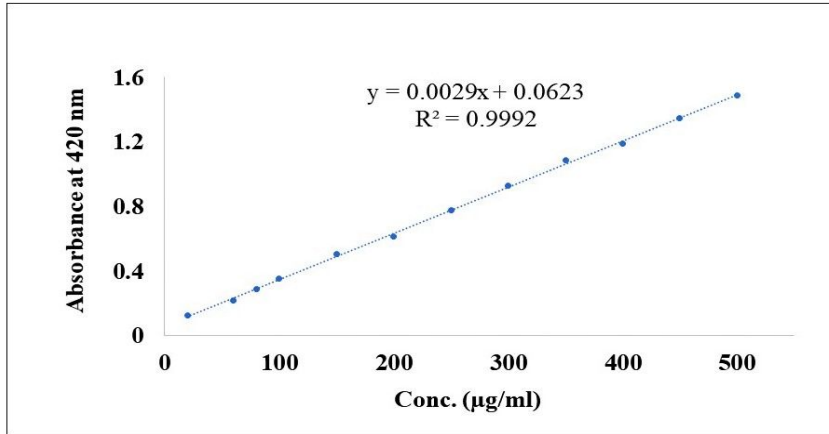
**ROS mediated apoptosis induced by BSA Nanospheres encapsulated with fruit extract of *Cucumis prophetarum* in various human cancer cell lines.**

**Authors:** Hemlata<sup>1</sup>, Shruti Gupta<sup>1</sup>, and Kiran Kumar Tejavath<sup>1\*</sup>

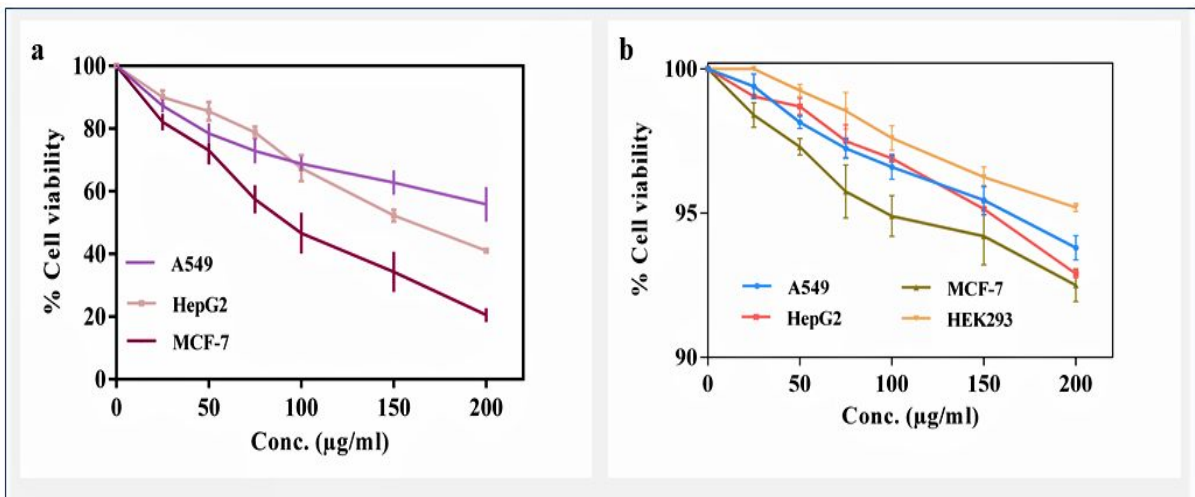
**Author affiliation:** <sup>1</sup>Department of Biochemistry, School of Life Sciences, Central University of Rajasthan, NH-8, Bandarsindri, Kishangarh - 305817, Dist. - Ajmer, Rajasthan, India.

**\*Corresponding Author:**

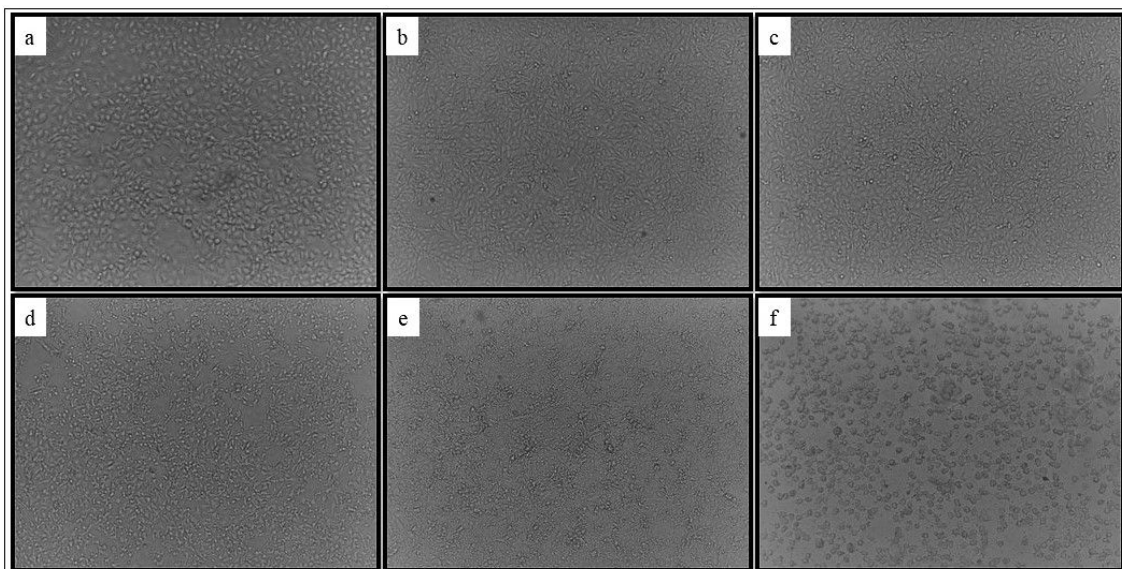
Dr. Kiran Kumar Tejavath,  
Department of Biochemistry, School of Life Sciences,  
Central University of Rajasthan, NH-8, Bandarsindri,  
Kishangarh - 305817, Dist. - Ajmer, Rajasthan, India.  
Tel +91 7725908348. Email: [kirankumar@curaj.ac.in](mailto:kirankumar@curaj.ac.in)



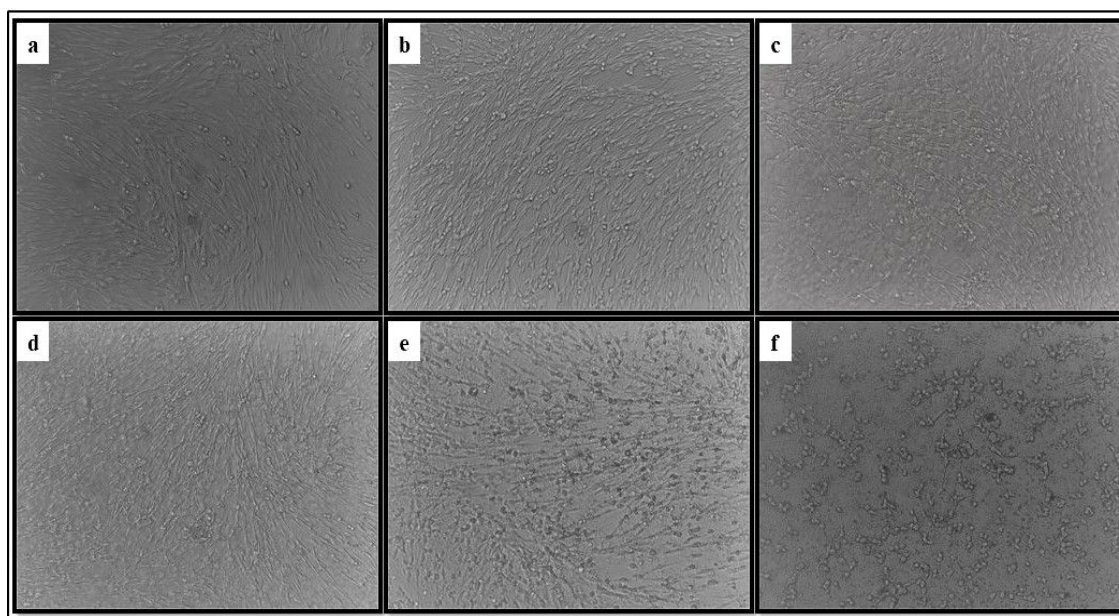
**Figure S1:** Calibration curve of quercetin.



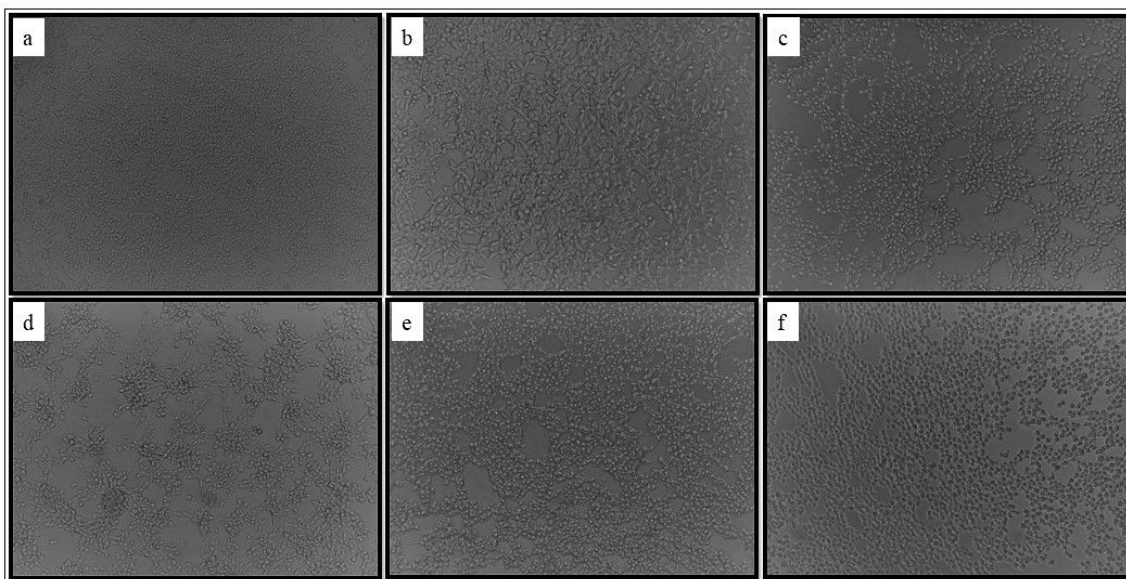
**Figure S2:** Effect of different concentrations of (a) Quercetin (positive control) and (b) blank BSA nanospheres on the viability of various human cancer cell lines and HEK 293 cell line



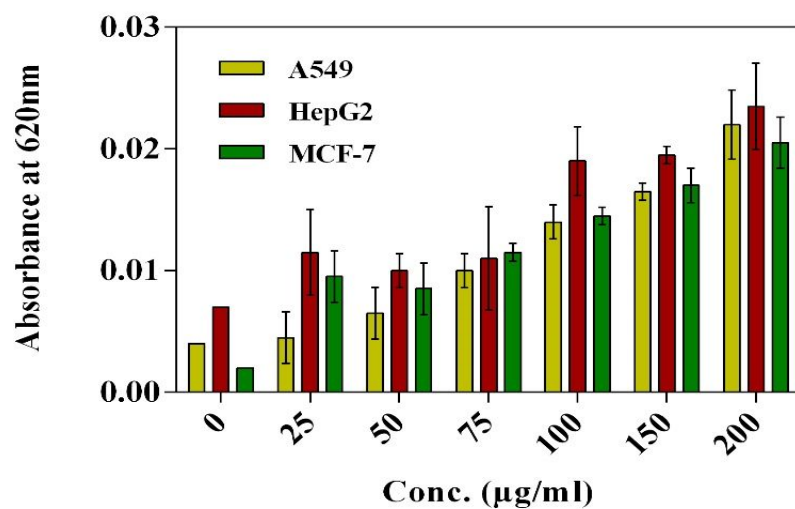
**Figure S3:** Change in cell morphology and proliferation of A549 cells after treatment with different concentrations, a. Control; b. 25  $\mu\text{g/mL}$ ; c. 50  $\mu\text{g/mL}$ ; d. 100  $\mu\text{g/mL}$ ; e. 150  $\mu\text{g/mL}$  and f. 200  $\mu\text{g/mL}$  of Cp-BSA nanospheres.



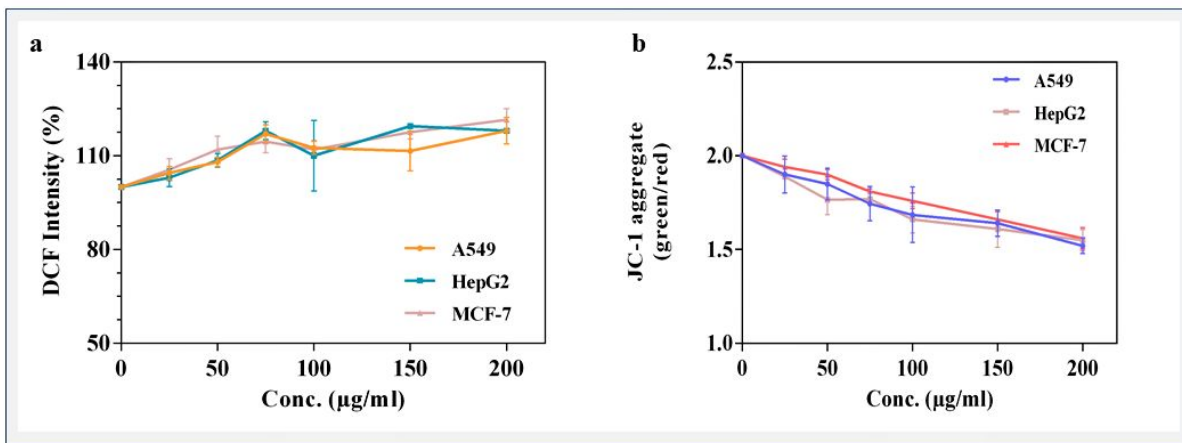
**Figure S4:** Change in cell morphology and proliferation of HepG2 cells after treatment with different concentrations, a. Control; b. 25  $\mu\text{g/mL}$ ; c. 50  $\mu\text{g/mL}$ ; d. 100  $\mu\text{g/mL}$ ; e. 150  $\mu\text{g/mL}$  and f. 200  $\mu\text{g/mL}$  of Cp-BSA nanospheres.



**Figure S5:** Change in cell morphology and proliferation of MCF-7 cells after treatment with different concentrations, a. Control; b. 25  $\mu\text{g/mL}$ ; c. 50  $\mu\text{g/mL}$ ; d. 100  $\mu\text{g/mL}$ ; e. 150  $\mu\text{g/mL}$  and f. 200  $\mu\text{g/mL}$  of Cp-BSA nanospheres.



**Figure S6:** Detection of ROS (superoxide ion) by reduction of NBT in cancer cell lines using blank BSA nanospheres.



**Figure S7: (a)** Effect of blank BSA nanospheres on intracellular ROS generation in different cancer cell lines and **(b)** loss of mitochondrial membrane potential after treatment with blank BSA nanospheres different cancer cell lines detected by JC-1 staining and expressed as the ratio of green/red fluorescence intensity.