** Research Profile**

**DR. BARKHA SINGHAL**

The current research interest includes the development of fermentation process for the modeling and optimization of surface proteins from probiotic microorganisms. As there are the primary line of defense against stress conditions therefore, research studies has been also focused on production and biochemical as well as functional characterization of these surface proteins under various environmental stress conditions. Currently, the work has been pursued in line of effect of various fermentation parameters on physicochemical surface properties that subsequently lead to affect the technological properties of probiotics. In the future, the research will focus on the development of probiotic metallic nanoparticles for assessment of their anti-biofilm activity. Besides that the development of electrochemical/luminescence/genetically encoded biosensors based on either whole cells or immobilized metabolites are under investigation for understanding the cellular dynamics.