



**Department of Biotechnology  
Ministry of Science & Technology  
Government of India**

**Call for proposals in the areas on Nanobiotechnology Research**

Nanobiotechnology enabled system may offer revolutionary advantages for the better treatment of complex disease like cancer. Aiming to promote and provide opportunities to the scientists working at the interface of cancer biology and nanobiotechnology, DBT invites proposals built upon innovative ideas on **Translational Nano Medicine** to address various issues in treatment of cancer by undertaking studies in the areas like:

- Novel nano formulations of already approved chemodrugs to improve the bio-availability, PK/PD, tumour specificity and reduction of toxicity
- Nanoscale modifications of clinical chemodrugs leading to significant improvement in the mode of action, PK/PD and toxicity profile
- Nano engineering for finding new targets for existing chemo drugs
- Identifying novel translational biomarker for nano medicine targets
- Implantable local drug delivery platforms for anti-cancer drug delivery
- Endogenous protein / biomineral nanoparticles based drug delivery systems
- Synergistic anti-cancer activity of nanoparticles in combination with chemodrugs
- Nanoparticles with inherent anti-cancer properties
- Nanobiotechnology based novel strategies for overcoming in vivo barriers
- Radio-frequency ablation using nanoparticles
- Photo-thermal ablation using nanoparticles
- Nanoparticle assisted magnetic hyperthermia
- Nano-RNAi system for siRNA and miRNA delivery and nano-gene delivery
- Anti-cancer nano-peptide therapy
- Nanoparticles assisted monoclonal therapy
- Molecularly targeted cancer nanomedicines
- Nano medicine targeted to drug resistance mechanisms

Interested applicants are requested to submit full proposal on DBT format online through e-promis.

Last date of submission: 30<sup>th</sup> June, 2015