Department of Biotechnology

Ministry of Science and Technology
Government of India

Call for Proposals on Bioengineering

Bioengineering is an interdisciplinary field of science wherein challenges in biology are addressed with solutions from cross disciplinary fields of science and engineering. The Department of Biotechnology through its conscious efforts has continuously fostered research initiatives in various challenging areas of Bioengineering. More recently it has been felt that Robotics has contributed immensely in the field of medicine. India's focus so far has been concentrated towards industrial robots and materials handling robots, and an impetus is needed to spur collaborative oriented research pertaining to Robotics in Medicine, bridging the disconnect between engineering research and medical Institutions in India. Moreover, Medical devices is an area where engineers could profusely contribute to translate their innovative ideas into a practicable application. With this as background, the Department of Biotechnology specifically invites R& D proposals in following areas:

a) ***Robotics in Medicine***

Proposals are invited under this topic towards innovative engineering approaches to develop navigational robots for surgery, haptics incorporated simulators for medical and surgical training, surgical assist technologies, and robotic devices for rehabilitation including prosthetics and mobility devices,;

b) ***Brain-computer interface technologies***,

Proposals are invited for human-machine interfaces for people with severe physical impairment, and for intuitive control of prosthetics and mobility devices, and related applications;

c) Bioengineering of implantable medical devices

Proposals are invited to develop implants or tissue engineered devices, organ assist devices, artificial or tissue engineered organs, implantable diagnostic devices integrated with electronics;

d) Engineering of point of care devices for early detection and diagnosis of diseases

Proposals are invited for point of care devices, including preventive technologies, non-invasive monitoring technologies, integrated mobile technologies, point of care photonics and wireless systems;

f) some combination of the above

Eligibility:

- Scientists working in the Universities/Academic Institutions/National Laboratories/Medical Schools with sound scientific backgrounds and relevant publications in proposed area.
- The proposal should be preferably developed in network mode involving two or more Institutes/Departments and involving clinicians/medical researchers and engineers/physical scientists.
- The proof of concept, preliminary results, focused objectives and quantifiable targets should be clearly defined. Field validation of the devices is highly desirable as part of the proposed project.

Mode of Selection:

Proposals received would be evaluated by Task Force for financial support.

Mode of Submission:

Proposals should be submitted online in the DBT's R & D format through **eProMIS** (http://dbtepromis.nic.in/Login.aspx) **under Category of Area-'Bioengineering'** clearly stating 'proposal against Call for Proposal'as mentioned in DBT format. 3 hard copies of uploaded proposal (epromis copy) also to be sent to**: Dr. Kakali Dey Dasgupta,** Scientist 'D', Department of Biotechnology, Block-2, Room No.816, 8th floor, CGO Complex, Lodhi Road, New Delhi – 110003 [kakali.dey@nic.in].

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