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IIT-K to develop unique medical implants

02 August 2018 | News

The team aims to implant coin sized electronic chips with wireless energy supply for rehabilitation and prostheses applications.



The Indian Institute of Technology (IIT), Kharagpur has set up a Bioelectronics Innovation Laboratory to develop battery-free implantable medical devices for treatment of brain, nerve, muscle or spinal cord disorders that are untreatable by using standard medical practices.

The team aims to implant coin sized electronic chips with wireless energy supply for rehabilitation and prostheses applications. Unlike the standard pace-makers that require a surgery every 5 to 10 years due to limited battery-life, this solution will depend on wireless power transfer and intelligent communication schemes. The novel bioelectronic devices will be able to sense bio-signals, process information to make intelligent decisions, and control diseased organs by electrical methods.

Grants have been received from IIT Kharagpur, under MHRD Imprint program and SFTIG Indo-Canadian Fellowship grant. It is in the process of setting up collaborations with several hospitals and institutes in India and abroad.