

Centre of Excellence for Research & Development of Nanoelectronics Theranostic Devices, Sponsored by MeitY (Grant no. 5(9)/2012-NANO)

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Centre for Nanotechnology



- Centre-of-Excellence started in 2014.
- CoE posses state-of-art micro/nanofabrication, characterization, and testing facilities.
- CoE has supported ~60 PhD theses & 200 MTech/BTech Projects
- The Project has led to 300 international publications
- CoE has led to 50 patents, 30 prototypes
- There are 10 Transfer-of-Technologies, 2 start-ups
- Finally, training of 530 highly skilled manpower.
- Some of the technologies developed are shown here.

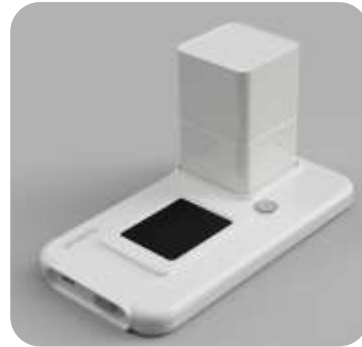
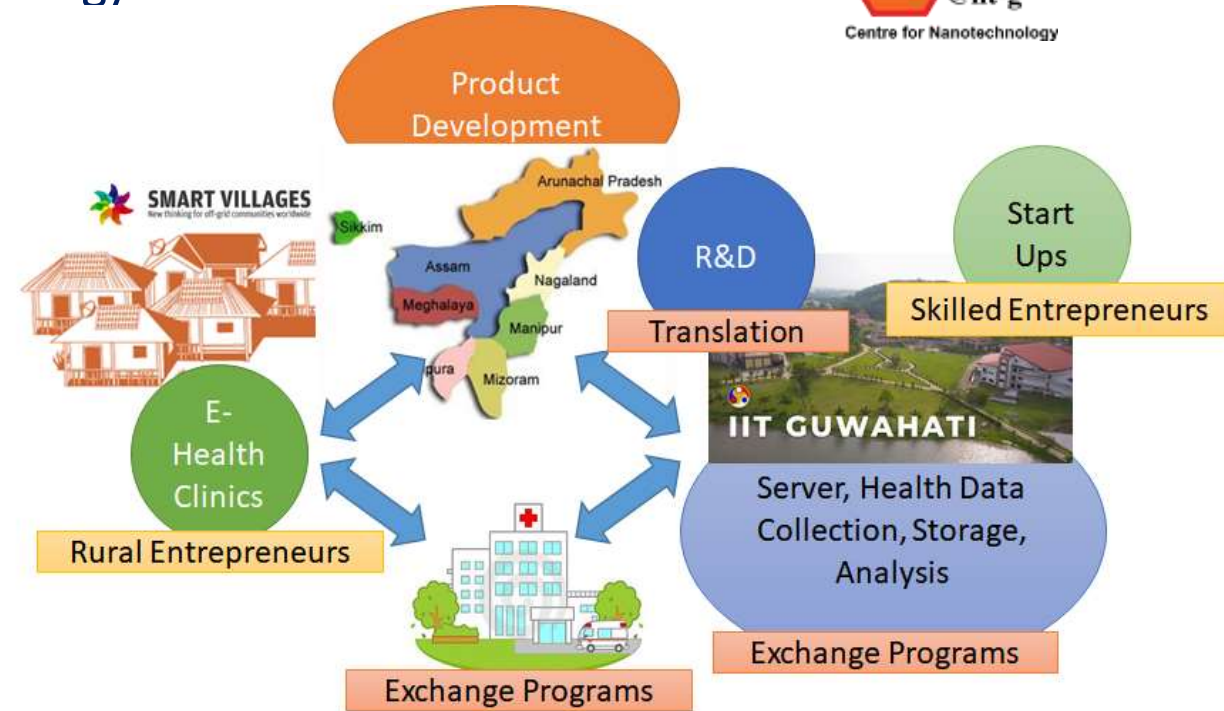


Centre for Excellence in Disruptive Innovations & Product Development for Affordable Rural Healthcare, Sponsored by ICMR (D.O.No.5/3/8/20)

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- The CoE has set the goal of developing point-of-care (POC) detection of biomarkers in blood serum and urine.
- Frugal innovations around such biomarkers, emulating the principles of glucometer or pregnancy kits, is expected to foster novel biomedical innovations.
- Presently, such Health Care Technologies (HCT) are designed and developed in abroad
- The CoE to attempt to develop minimum five such low-cost and portable HCTs for the POC detection.



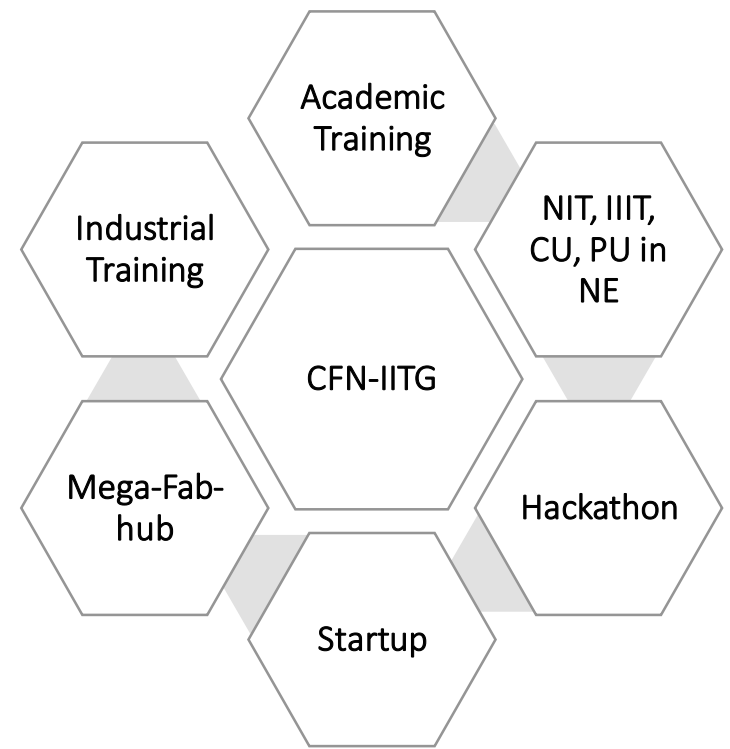


Indian Nanoelectronics Users' Program – Idea to Innovation, INUP – I2I, Sponsored by MeitY (Grant no. 5(1)/2021-NANO)

Dipankar Bandyopadhyay, Paramswar Krishnan Iyer, A. S. Akshai Kumar, Arun Tej M., D. Pamu,
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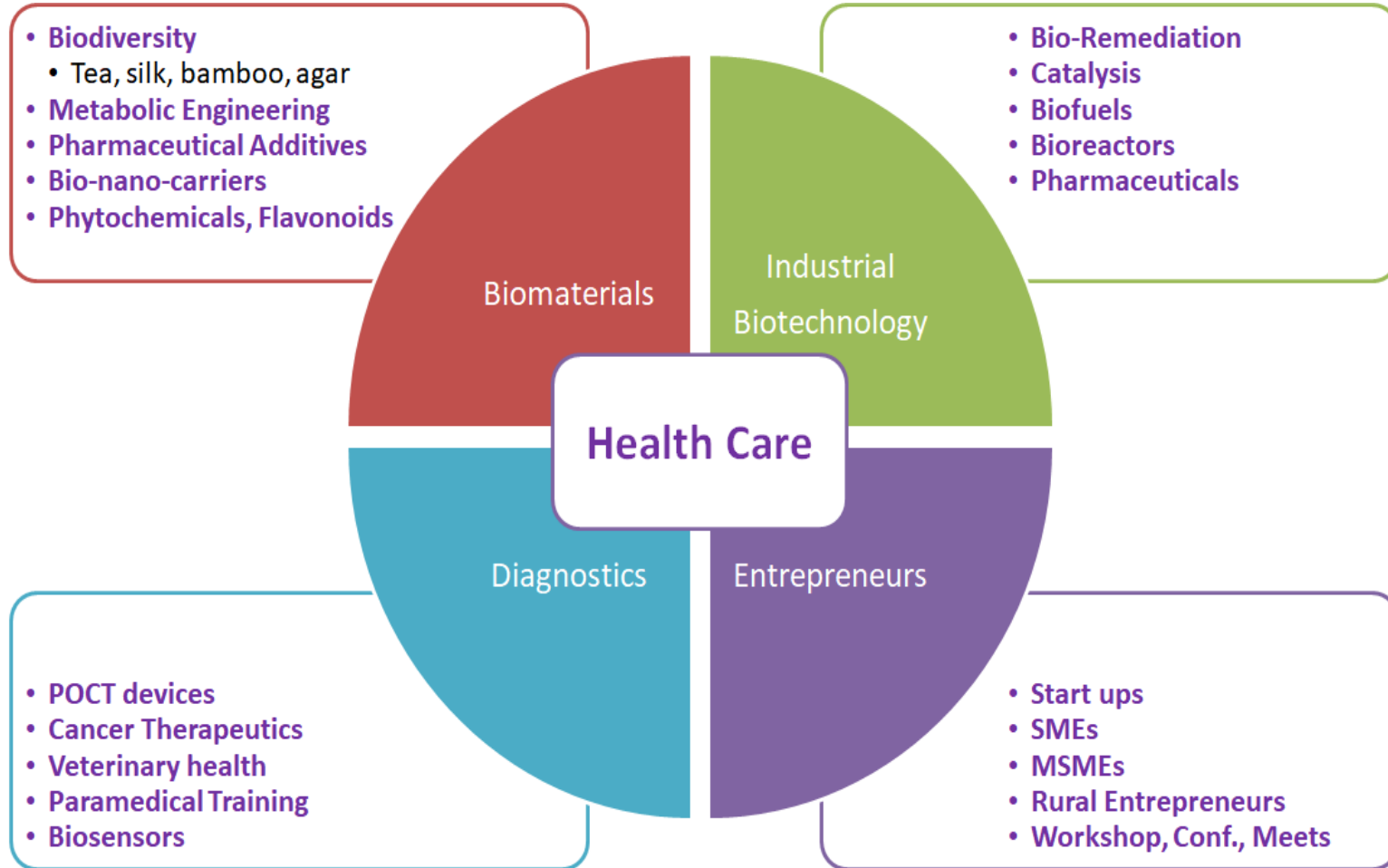


- **Upskill**
 - NIT, IIIT, CSIR Labs, Research Labs, CU and PUs of NE India
- **Online workshops on micro/nanoelectronic translation**
 - Fundamentals and applications
 - Publication-patent-writing
 - Design and product development
 - Hackathons
- **Online archival of the programs**
- **Hands-on training**
 - Fabrication, characterization, and testing
 - Materials and micro/nano devices.
- **Execute theme-based proposals with translational potentials**
 - Projects with researchers from different Institutions
 - Disruptive innovation
- **Facilitate & foster**
 - Start-ups/SMEs/MSMEs with disruptive translational potentials.



BIRAC-BioNEST for Healthcare Bio-Entrepreneurship Ecosystem Encompassing Biomaterials, Industrial Biotechnology and Diagnostics (grant no. BT/TEMP10247/BioNest-01/19), sponsored by DBT-BIRAC

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- BioNEST-IITG to attempt the next level of disruptive translational innovations in the areas of Biomaterials, Industrial Biotech., and Diagnostics.
- BioNEST-IITG to promote the development of easy-to-use frugal technologies.
- BioNEST-IITG to nurture and promote Women Led Entrepreneurship.
- BioNEST-IITG to exploit the abundance of commercially viable biomaterials NE such as tea, rubber, jute, silk, bamboo, agar, and hyacinth
- BioNEST-IITG to run entrepreneurship development programs and investors meet for sprouting start-ups, SME, MSME and rural entrepreneurs