Centre for Research in Medical Devices (CÚRAM)

The centre aims to radically improve health outcomes for patients by developing ‘smart’ medical devices and implants. It develops these devices through collaborations with industry partners and hospital groups to enable their rapid translation to clinics.

CÚRAM positions Ireland as the driver in developing medical device technologies that will provide affordable transformative solutions for chronic diseases. The centre strengthens Ireland’s standing as a major global hub for medical device research and development.

CÚRAM’s research programme focuses on innovative design, assessment and manufacture of medical devices and is driven by specialist researchers, clinicians and industry partners, ultimately translating research into clinical settings.

Research Areas

- Biomaterials
- Drug Delivery
- Tissue Engineering
- Regenerative Medicine
- Device Design
- Glycoscience

Research Programmes

Backed by €49.6m in SFI and industry funding, CÚRAM’s 250+ researchers are designing and manufacturing implants to respond to the body’s environment and delivering therapeutic agents exactly where they are needed. CÚRAM’s outputs will particularly benefit patients with chronic ailments such as heart disease, wound healing, diabetes and musculoskeletal diseases.

Facilities

- Biomaterials manufacturing and processing from nanoscale to macroscale level
- Extensive biomaterials and biological characterisation
- Physicochemical drug analysis
- Device design and testing
- National Biophotonics Imaging Platform (NBIP) including pre-clinical imaging
- Centre for Cell Manufacturing (CCMI)
- Preclinical disease models
- GMP manufacturing
- Clinical research and trial infrastructure

Industry and commercialisation

CÚRAM includes more than 24 industry partners, including Irish companies and multinationals. CÚRAM also supports product development and the creation of spin-out companies.
Education and Public Engagement:
CÚRAM's Education and Public Engagement programme has been designed to support Science Foundation Ireland’s Agenda 2020 objective of ‘having the most scientifically informed and engaged public’. SFI-funded researchers at CÚRAM engage with the community through three core residency programmes, for artists, filmmakers and teachers.

The Artists in Residence programme supports interaction between the artistic, scientific and industry communities to develop outputs that can educate and inspire the public about the creativity and innovation involved in Irish R&D in the medical devices field.

The Filmmakers in Residence programme ‘Science on Screen’, aims to increase the level of scientific research incorporated into TV and film and develop a Science on Screen Festival.

The annual Teachers in Residence Programme runs from October to March and aims to develop a MedTech educational module designed for teachers by teachers, linking with both the primary and secondary school curricula.

Participation at national events allows CÚRAM researchers to engage with a wide national audience. Events include BT Young Scientist Exhibition, Famelab, TeenTech, Brain Awareness Week, The Galway International Arts Festival, The Ploughing Championships and the Galway Science and Technology Festival.

Key Contacts

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Abhay Pandit, PhD, Professor of Biomaterials at the National University of Ireland, Galway, is Scientific Director of the Centre for Research in Medical Devices (CÚRAM). Through CÚRAM he develops affordable, innovative and transformative device-based solutions to treat global chronic diseases. During his career in the medical device sector he secured regulatory clearance for a hydrophilic wound dressing, and secured IDE approval for a family of collagen vascular sealants for FDA submissions. In 2013, he was awarded the Academic/ Emerging Medical Technology Company of the Year Silver Award, he was the first Irish academic to be elected a Fellow of the Tissue Engineering and Regenerative International Society and was also inducted as an International Fellow in Biomaterials Science and Engineering by the International Union of Societies for Biomaterials Science and Engineering.

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Industry Partners Include:

- Aerogen
- Arch Therapeutics
- Acuitive
- Boston Scientific
- Cook Medical
- Medtronic
- Mylan Inc
- Neuravi
- Stryker

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