



NUI Galway
OÉ Gaillimh



PhD Fellowship – TBMED

Organisation: The Centre for Research in Medical Devices (CÚRAM) is a national, SFI funded, €49.6m research centre that brings together researchers from NUI Galway, University College Dublin, Dublin City University, University of Limerick, University College Cork, Trinity College Dublin and Royal College of Surgeons Ireland. The prime objective for CÚRAM is to radically improve health outcomes for patients by developing innovative implantable ‘smart’ medical devices to treat major unmet medical needs. Implants will be designed and manufactured to respond to the body’s environment and to deliver therapeutic agents, such as drugs, exactly where needed. Cutting-edge science will develop devices using the very latest research from biomaterials, stem cells and drug delivery and the support of strong clinical collaborations, industry partners and hospital groups to enable rapid translation to the clinic. The centre will include almost 40 industry partners and support.

Website: www.curamdevices.ie

<http://www.curamdevices.ie/curam/about-us/our-people/director/professor-abhay-pandit.html>

Funding Details: TBMED is a H2020-EU.2.1.2. - INDUSTRIAL LEADERSHIP project that will establish an open innovation testing bed specialized in the development of high-risk devices (\geq Class IIb). Due to a long reimbursement processes, patient access to innovative high-risk medical devices in Europe can take four times longer than in the U.S. In addition to this, the new regulations will stricter ex-ante controls for this type of devices. This scenario represents a big challenge for European high-tech SMEs (representing 95% of the MedTech sector in Europe) to maintain their competitiveness and innovation capacity. TBMED will provide an integral service to accelerate the development of medical devices reducing time to market, covering technology development from TRL4- 7 based on Quality-by-Design (QbD) concept and business management services. QbD concept enhances product and process understanding together with process control, based on robust scientific knowledge and quality risk management.

Once operating (M37) the OITB will integrate: 1) an SME once that will provide business advice and IP management, 2) services on regulation, early health technology assessment advice and QbD, 3) a biomaterial synthesis lab, 4) characterization facilities, 5) a testing lab for in vivo and in vitro efficacy testing, 6) safety assessment and 7) clinical testing. Three case studies will be used to validate the concept and will help to establish the OITB: 1) An osteoinductive hydrogel, 2) Keratoprosthesis and 3) Magnetic NPs for hyperthermia. TBMED consists of 13 complementary partners composed by 1 Industry and 2 SMEs developers of 4 different medical devices used as case studies, 5 RTD institutions experts in the development of medical devices, 1 SME expert in QbD methodology, 2 RTD Institutions that will provide the access to a hospital network with experience in regulation, health technology assessment and clinical investigation design and testing and 2 consultancy (SME) experts on business plan development, IPR management and communication activities.

The Consortium consists of Fundacion Cidetec (Coordinator), AJL Ohpthalmic S.A., Eurice European Research And Project Office GMBH, Institut National De La Sante Et De La Recherche Medicale, Societe Industrielle Limousine D'application Biologique, Universidad De Zaragoza, Nanoscale Biomagnetics Sociedad Limitada, Fraunhofer Gesellschaft Zur Foerderung Der Angewandten Forschung E.V., NUI Galway, Cybernano, Ecrin European Clinical Research Infrastructure Network, Fundacion Vasca De Innovacion E Investigacion Sanitarias, Antares Consulting SL.

Qualifications:

The candidate should have a 1st class or a 2:1 honours first degree and a Master’s in any of the following areas: biomaterials, biomedical engineering, chemistry, molecular biology, biotechnology, tissue engineering, medicine, cell biology, biology, drug discovery or in a related area. The ideal candidate should have experience in as many of the following techniques: cell (permanently differentiated and stem cells)

biology; molecular biology; protein / gene analysis; histology; and immunohistochemistry, biomaterial fabrication/synthesis. Candidates should have excellent **communication and organisational skills**; be highly motivated and passionate about developing new products; and have strong written, oral and interpersonal skills. The candidate should be able to work **independently** and as a part of team. Leadership skills are desirable for this fellowship. The candidate will be working under the supervision of Prof. Abhay Pandit (<http://www.curamdevices.ie/curam/about-us/our-people/director/professor-abhay-pandit.html>).

Start Date:

The post is available immediately.

To Apply:

Applicants should submit a cover letter outlining their suitability to the post, a detailed CV and the contact details of three referees. The application pack should be emailed to Professor Abhay Pandit at dana.toncu@nuigalway.ie. **Closing date for receipt of applications is 17.00 on Friday 2nd August 2019.** Shortlisted candidates will be further evaluated for their writing ability through an essay on a given topic and subsequently interviewed.

Equal Opportunities Statement:

The National University of Ireland Galway is an equal opportunities employer.