



The mission of **NanoReMedi** is to define a **joint doctorate educational training model** in **Functional NANO-scaffolds for REgenerative MEDicine** where Academia and Industry join their forces to:

- create a highly innovative research network for training a new generation of researchers who will enter the area of nanoscience from adjacent disciplines (such as chemistry, material sciences and bioinformatics)
- establish a solid framework for long-term research cooperation between a pool of leading Universities and Enterprises
- build a solid foundation for long-term European excellence in medical nanotechnology

**NanoReMedi** project promotes institutional Cooperation and Mobility of **13 early stage researchers**. 2 of them are enrolled in the **Bioengineering, Bioinformatics and Health Technologies PhD course** at **University of Pavia** and other 2 young researcher in “cotutelle” with the **Hebrel University of Jerusalem** or the **Asociacion Centro de Investigacion cooperativa en Nanociencias CIC Nanogune (University Politecnica de Catalunya)**.

The **NanoReMedi consortium** (Università di Milano, Università di Pavia, Universitat Politecnica de Catalunya, Hebrel University of Jerusalem, Universite de Montpellier and l’Asociacion Centro de Investigacion cooperativa en Nanociencias CIC Nanogune together with 11 european companies) is strongly multidisciplinary and takes advantage of a number of different state-of-the-art technologies and methodologies:

- Peptide based Nanomaterials production and characterization
- Chemical synthesis/peptide synthesis
- Computational chemistry

The research project aims to repair or replace tissue and organ functions lost due to age, disease or damage, one of the most urgent medical needs of our aging society. The NanoReMedi scientific approach relies on the **design, preparation, characterization and validation of innovative peptide-based functional nanomaterials for regenerative medicine applications**. NanoReMedi tackles three highly relevant case studies:

- Tissue engineered vascular grafts to replace damaged peripheral arteries
- Stem-cell based regenerative medicine for bone and cartilage repair
- Facing with implantation failure due to bacterial severe infections. to train a new generation of researchers in nanoscience to establish a framework for long-term research cooperation between leading Universities and Enterprises to build up long-term European excellence in nanotechnology

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CONTACTS:

Supervisor: [ida.genta@unipv.it](mailto:ida.genta@unipv.it)

Co-supervisor: [enrica.chiesa@unipv.it](mailto:enrica.chiesa@unipv.it)

Web: [www.nanoremedi.eu](http://www.nanoremedi.eu)