13 DC positions within the programme

Horizon Europe (HORIZON)

Marie Skłodowska-Curie Actions

Doctoral Networks (DN)

"NanoReMedi"

"Functional *Nano*-Scaffolds for *Re*generative *Medi*cine"

(HORIZON-MSCA-2021-DN-01, proposal 101072645 — NANOREMEDI)

OPEN CALL: 29 September-28 October 2022

The **Horizon Europe MSCA-*Doctoral Network* NanoReMedi** ("Functional *Nano*-Scaffolds for *Re*generative *Medi*cine") is run by a Consortium of Universities in cooperation with Companies and offers an innovative PhD level training in Nanomaterials for regenerative medicine to 13 Doctoral Candidates (DCs).

3 Positions are available to the University of Milan (PhD course in Pharmaceutical Sciences)

1. BENEFICIARIES

→ University of Milano (Department of Pharmaceutical Sciences) - ITALY - Coordinating University

→ Universitat Politècnica de Catalunya (Barcelona Tech Department of Chemical Engineering) - SPAIN

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→ The Hebrew University of Jerusalem (Institute of Chemistry) - ISRAEL

→ Université de Montpellier (IBMM and IRMB) - FRANCE

→ University of Pavia (Department of Drug Sciences) - ITALY

→ IC NANOGUNE (BRTA) ("Self-Assembly" Group, - San Sebastian) SPAIN

2. ASSOCIATED PARTNERS

- University of the Basque Country (UPV_EHU) – SPAIN - Associated Partner linked to NANOGUNE beneficiary
- Bayer Health Care Pharmaceuticals - ITALY
- Edelweiss Connect GMBH – SWITZERLAND
- Italfarmaco S.p.A. (CHEMI) – ITALY
- Jacobacci & Partners - ITALY
- Lynxter -FRANCE
- Simune Atomistics SL - SPAIN
- Ponti & Partners, SLP - SPAIN
- AbMedica - ITALY
- DeLama - ITALY
- Officine Innovazione Srl (*Deloitte*) - ITALY
- Genepep - FRANCE
- BioBasic Europe rsl - ITALY

3. NANOREMEDI expected results

The scientific approach proposed by *NanoReMedi* Consortium is strongly multidisciplinary and will involve a number of different state-of-the-art technologies and methodologies. Expected results are to:

- Generate tissue engineered vascular grafts (VGs) to replace damaged peripheral arteries
- Study stem-cell based regenerative medicine for bone and cartilage repair
- Takle implantation failure of engeneered tissues/scaffolds

Based on the *NanoReMedi* research programme, applicants are requested to choose among 13 different and multidisciplinary projects strongly related to each other. Different state-of-the-art technologies and methodologies relevant to the project are listed below:

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- Computational chemistry
- Chemical synthesis/peptide synthesis
- Peptide-based nanomaterials (Soft materials/Hydrogels/Electrospinning)
- Nanomaterials spectroscopic characterization
- Production of vein graph
- 3D-tissue fabrication
- Biofilm prevention
- Electrostimulated release of antimicrobial peptides

4. DOCTORATE COURSES/SCHOOLS

Each ***NANOREMEDI*** multidisciplinary project will be carried out in two of the following doctorate courses/schools and research groups.

University	Doctorate Course/School	Link
University of Milano	Pharmaceutical Sciences	https://www.unimi.it/en/education/postgraduate-programmes/doctoral-programmes-phd/ay-2021/2022-pharmaceutical-sciences
The Hebrew University of Jerusalem	School of Chemistry	http://www.research-students.huji.ac.il/en;
University of Pavia	Bioengineering, Bioinformatics & Health Technologies	http://phd.unipv.it/corsi-trasversali-per-dottorandi/
Université de Montpellier	Balard Chemical Sciences doctoral school	https://edscb.umontpellier.fr;
Universitat Politècnica de Catalunya	Polymers and Biopolymers	https://eebe.upc.edu/ca/estudis/estudis-de-master/master-chemical-engineering-smart-chemical-factories/nou-pla-estudis-master-enginyeria-quimica
UPV_EHU for NANOGUNE	Materials Physics	https://www.ehu.eus/en/web/doktoregoa/doctorate-physics-nanostructrures-advanced-materials

Each DC will attend the following **training activities**:

- Advanced courses **and acquisition of soft and transferable skills provided by the home University's doctorate courses/schools**
- Nanomaterials preparation and characterization
- Network-wide multidisciplinary training activities at the general *Network Meetings/Summer Schools*
- Nine-months secondment at one of the beneficiaries jointly awarding the doctoral degree to complement the training through **research methods offered at the home institutions**

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- **Three months secondment at one of the partners where DCs are expected to acquire complementary skills**

5. **Why to** participate into the ***NANOREMEDI*** programme?

- Cutting-edge research on **Functional *Nano*-Scaffolds for *Re*generative *Medi*cine**
- Critical "*nano skills*" learning
- Top research centers in Europe
- Inter- and multi-disciplinary programmes
- Advanced courses; summer schools; seminars
- International mobility plan
- Stage scholarship opportunities in enterprises

6. DCs RECRUITMENT

Each DC will receive a **36-month** grant to cover their participation costs, living, travel and installation allowance, family allowance, as follows:

	Living allowance *	mobility allowance	family allowance	total grant (36 months)
Unimi and UNIPV	3.311,60 €	600,00 €	495,00 €	158.637,60 €
UPC	3.104,20 €	600,00 €	495,00 €	151.171,20 €
HUIJI	3.644,80 €	600,00 €	495,00 €	170.632,80 €
UM	3.957,60 €	600,00 €	495,00 €	181.893,60 €
Nanogune	3.104,20 €	600,00 €	495,00 €	151.171,20 €

* This amount varies because of the application of a correction coefficient to the living allowance of the country in which the researcher will be recruited.

The cost of the PhD educational activities, as well as all expenses related to travels performed to attend schools, workshops, and network-organized events, will be planned and sustained by the network through the HORIZON EUROPE MSCA-DOCTORAL NETWORK grant (Institutional Costs).

The DCs will be provided with office space and all facilities for his/her research programme.

7. Eligibility criteria

There are strict eligibility requirements for the DC positions in MSCA-DN. Please ensure to

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be qualified before applying, as ineligible candidates cannot be considered.

- Admission to the programme is *open* to applicants who hold a **2nd Level Master Degree** (120 ECTS + 180 ECTS in a bachelor degree) or a **Single Cycle Degree** (minimum 300 ECTS), or a **comparable university degree** (Second Cycle qualification), as required by the partner universities for admission to doctoral studies. Applicants are expected to achieve their degree within November 28th, 2022. They shall submit a certified copy of any degree achieved by the deadline of January 31st, 2023.
- Requirements set by the Consortium concern master's degree (or equivalent) graduates in the fields of computational chemistry, organic chemistry, materials chemistry, materials engineering, chemical engineering, pharmaceutical chemistry, pharmacy, biotechnology, biomedical engineering.
- Applicants are required to be proficient in the English language (at least B2 level).
- Applicants should – at the time of recruitment – be in the first four years (full time equivalent research experience) of their research careers not yet have been awarded a doctorate. They must not have resided or carried out their main activity (work, studies, etc.) in the country of their host organization for more than 12 months in the 3 years immediately before their recruitment date. Compulsory national service and/or short stays such as holidays and time spent as part of a procedure for obtaining refugee status under the Geneva Convention are not taken into account.

The Recruitment board will pay special attention to respect gender balance.

8. Selection criteria

The DC will be selected on the basis of the following criteria (in random order):

- scientific skills and research experience;
- ability to collaborate and communicate;
- career profile and potential for excellence;
- expected impact of the proposed training on their career;
- research project.

9. How to apply

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Applications must be submitted on www.nanoremedi.eu/APPLICATION **by September 29th, 2022 at 17:00 central European time** (http://www.timeanddate.com/time/zones/cet) within **October 28th 2022 at 17:00 central European time**.

Applicants are required to submit the following documents by **uploading them as a PDF file along with (or as one PDF attachment to) the application form.** Instructions on submission are provided on www.nanoremedi.eu/APPLICATION. For more information you may also contact nanoremedi@nanoremedi.eu

Hand written applications and applications sent by email, post or fax will *not* be accepted.

- Detailed *curriculum vitae* (European format; List of Publications, Participation in funded research projects, Other qualifications, if any, must be included)
- Certified copy of Academic Degree/s in original language along with a certified translation into English, and/or Diploma Supplement (if applicable)
- Certified copies of official Academic Transcripts relating to all academic courses taken to earn every degree (bachelor/master or equivalent), translated into English, and correspondent grade point average
- Applicant's proposed project within one of the *NanoReMedi* multidisciplinary projects
- Letter of research statement, describing the applicant's research experience in relation with the project/s s/he is applying for (max 1500 words). The letter will report a description of the applicant's master research project and a self-evaluation on scientific and soft skills (Form 2)
- Motivation letter (Form 3)
- Two recommendation letters (Form 4)
- English certificate
- Copy of passport (or, for EU citizens, equivalent ID document)

Failure to submit any of the above documents with the exception of: Diploma Supplement, publications, other qualifications and documents referring to the participation in funded research projects, implies exclusion from the *NanoReMedi* assessment procedure.

All data provided by the applicants are processed solely for the purpose of the *NanoReMedi* call for applicants.

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10. Selection Procedure

NanoReMedi will adopt the principles of the **European Charter for Researchers and Code of Conduct for the Recruitment of Researchers** (Charter and Code) promoting open, merit-based and transparent recruitment and attractive working and employment conditions.

The two-step procedure for applicants' selection is based on assessment of the documents attached to the application and on an interview (videoconference) to those applicants who have passed the first-step selection. The threshold to qualify for the interview will be set by the recruitment board and published on the *NanoReMedi* website soon after the call's deadline.

Shortlisted applicants will be informed of the interview process **within two weeks of the deadline for applications** by consulting the *NanoReMedi* website.

Upon completion of the two-step procedure an applicants' ranking list will be published on the *NanoReMedi* website based on the total score assigned to each applicant. A reserve list will be created.

For further information please contact:

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