



Nine Doctoral positions within TheraTools project funded under the Marie Skłodowska Curie Actions (Horizon Europe)

Nine Doctoral positions (PhD positions) are open within the **European MSCA Joint Doctoral Network** (www.theratools.eu) funded under the Marie Skłodowska Curie Actions (Horizon Europe).

Applicants must have a BSc and MSc in Chemistry, Chemical Engineering & Materials or related disciplines, with a strong background in polymer materials, bioengineering and/or biomaterials. The candidate will follow the training program of TheraTools project. The expected starting date is between February and March 2023 (July 2023 at the latest). The nine doctoral positions are the following:

DC1: *Tailoring of protease-sensitive nanogels to encapsulate and release antibodies after crossing the BBB.*

- **Recruiting Institution:** (1°) University of the Basque Country (UPV/EHU) -POLYMAT (San Sebastian-Spain, 24 months); (2°) Technion – Israel Institute of Technology (Israel, 12 months)
- **Secondment Institution:** I+Med (Spain)

DC2: *Human protein based nanogels for the biomimetic drug delivery of anticancer antibodies.*

- **Recruiting Institution:** (1°) University of Aveiro (Portugal, 24 months) and (2°) University of the Basque Country-POLYMAT (Spain, 12 months)
- **Secondment Institution:** MetaTissue

DC3: *Novel peptide shuttle-modified drug nanocarriers for active targeting of anticancer antibodies (cetuximab) to glioblastoma cancer cells.*

- **Recruiting Institution:** (1°) Technion – Israel Institute of Technology (Israel, 24 months) and (2°) University of the Basque Country-POLYMAT (Spain, 12 months)
- **Secondment Institution:** Vetex (Cyprus)

DC4: *Multilayer polymer capsules with sono-responsive properties as antibody nanocarriers capable of crossing the blood-brain barrier.*

- **Recruiting Institution:** (1°) University of the Basque Country-POLYMAT (Spain, 24 months) and (2°) Italian Institute of Technology (Italy, 12 months)
- **Secondment Institution:** Polimerbio S.L., Vetex

DC5: *Sono-responsive shuttle peptide-modified polymer/ceramic nanoparticles and their validation in 3D-bioprinted heterocellular tumor model,*

- **Recruiting Institution:** (1°) Technion – Israel Institute of Technology (Israel, 24 months) and (2°) University of Aveiro (Portugal, 12 months)
- **Secondment Institution:** Metatissue (Portugal)

DC6: *Personalized in vitro models of the blood-brain barrier.*

- **Recruiting Institution:** (1°) Italian Institute of Technology (Italy, 24 months) and (2°) University of the Basque Country-POLYMAT (Spain, 12 months)
- **Secondment Institution:** BeonChip

DC7: *Self-assembled sensorized 3D models of the blood-brain tumor barrier.*

- **Recruiting Institution:** (1°) Italian Institute of Technology (Italy, 24 months) and (2°) University of Aveiro (Portugal, 12 months)
- **Secondment Institution:** BeonChip

DC8: *BBB model based on perfusable flexible tubes to tailor the biophysical and chemical environment for drug delivery.*

- **Recruiting Institution:** (1°) University of Aveiro (Portugal, 24 months) and (2°) Italian Institute of Technology (Italy, 12 months)
- **Secondment Institution:** BeonChip

DC9: *3D pathological models of vascularized glioblastoma tumor microenvironments via bioprinting.*

- **Recruiting Institution:** (1°) University of Aveiro (Portugal, 9 months) and (2°) University of the Basque Country / POLYMAT (Spain, 24 months)
- **Secondment Institution:** Metatissue (Portugal, 3 months)

Eligibility criteria: We welcome applications until 27/11/2022 from candidates of any nationality completing the following criteria:

- Candidates **must not have resided or carried out their main activity** (work, studies, etc.) in the country of the first recruiting organisation for more than 12 months in the 3 years immediately prior to their recruitment. Date of recruitment means the first day of the employment of the researcher for the purposes of the action (i.e. the starting date indicated in the employment contract/equivalent direct contract).
- Candidates shall, at the date of recruitment by the host organisation, **be in the first four years of their research careers** and have not been awarded a doctoral degree.
- Candidates must **have a master degree or equivalent** diploma in Chemistry, Chemical Engineering & Materials or related disciplines, with a strong background in polymer materials, bioengineering and/or biomaterials.
- Candidates may be required to provide documentation proving their eligibility for recruitment, i.e. to provide supporting documentation proving your place(s) of residence or work during the previous 3 years.

Candidates must have a high level of proficiency in written and spoken English, which will be assessed with the motivation letter and the interview, respectively.

Candidates must submit their applications through the project website www.theratools.eu/open-positions until November 27, 2022. Applications must contain the following documents in **one single PDF file**:

1. Motivation letter
2. A 2-page statement of your previous or current research interests
3. Curriculum vitae
4. A digital copy with all academic certificates and academic records (in the respective official English transcription).
5. Two letters of recommendation including contact details.

All the above documents must be provided in English.

(Each candidate can apply to a maximum of two individual PhD projects.)