

Post-doc position in the framework of the PNRR-TR1-2023-12378316 (Missione: M6/componente: C2 Investimento: 2.1 Valorizzazione e potenziamento della ricerca biomedica del SSN)

at the Dipartimento di Biochimica e Farmacologia Molecolare Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Via Mario Negri 2 - 20156 Milano, Italy

Title of the project: “*Smart systems for the targeting and killing of mesothelioma tumors (Smyle)*”

A post-doc position for 2 years, starting on November 1st is open at the Istituto di Ricerche Farmacologiche Mario Negri in Milano in the group of Prof. Luisa De Cola in the laboratories Materials for Health. The units is developing several nanomaterials to be used as carriers and delivery for drugs, hydrogels for tissue regeneration or multiple release of large molecules and targeting for a precise therapy.

Requirements:

- PhD in Chemistry, Chemical Engineer, Material Science, Pharmaceutical Chemistry or Biotechnology or any biomedical disciplines.
- The candidate must be fluent in written and spoken English.
- Excellent ability to organize the work and do research in team.
- Experience in working in a biolabs and different cell lines
- Experience with microscopic techniques (confocal, SEM, TEM)
- Experience on nanomaterials synthesis and characterization will be appreciated

Research activities to be performed:

The project deals with the development of hybrid nanomaterials designed for targeting mesothelioma tumor and able to release different drugs. The project is a very interdisciplinary research and include the synthesis and characterization of the materials, the assessment of their targeting ability *in vitro* and *in vivo* and the role of the immuno system that can be stimulate to enhance the efficacy of the therapy.

The candidate appointed will be trained to the synthesis and characterization of nanomaterials and he/she will test the toxicity/dose dependance and the degradation of the nanomaterials in different cell lines. Targeting of the nanomaterials will be studied using exosome, extracted and purified by human samples, and used to cover the nanocarriers. Western Blot analysis and proteomics will be done on the exosomes. Cryo-TEM analysis will be performed in collaboration with the University of Milan.

Application: Candidates must send their CV, publications list and a short description of their skills and achievements to Prof. Luisa De Cola via email (luisa.decola@marionegri.it).

The deadline for applications is October 6, 2024.

The starting date of the contract must within 1st November.