



One PhD position (36 months) is available at the Department of Chemistry of the University of Milan (*Università degli Studi di Milano*) in the frame of the Marie Skłodowska-Curie Innovative Training Network (ITN-ETN) "Small-Molecule Drug Conjugates for Targeted Delivery in Tumor Therapy" (*Magicbullet::Reloaded*) funded by the European Commission (Grant agreement no: 861316).

The researcher, who will take part in the above project, will be enrolled by the University of Milan in the PhD Course of Chemistry, granting a PhD degree at the end of three years.

### Goals of the network project

The Marie-Sklodowska-Curie European Training Network *Magicbullet::Reloaded* will develop and employ approaches for selective, targeted delivery of a panel of anticancer drugs for directed tumor therapy. The activities of the consortium will be devoted to four different project areas:

- Small molecule-drug conjugates (SMDCs) and peptide-drug conjugates (PDCs)
- Multivalency and crosstalk with the immune system
- Pharmacokinetics: Transport, drug release, and metabolism
- Biological evaluation of the conjugates

The ETN *Magicbullet::Reloaded* will provide young early-stage researchers (ESRs) with a unique portfolio of multidisciplinary competences, cutting-edge proficiencies and transferable soft skills to push the boundaries of frontier research within the EU. Within a highly cross-linked and inter-sectoral research network between academia and industry, the recruited ESR will be involved in all stages of drug development, ranging from synthetic chemistry over medicinal chemistry to tumor biology and assay development. This network will warrant a cutting-edge interdisciplinary education, supplemented by a well-balanced training in transferable soft skills, directly focused on the demands and needs of each individual researcher. The close cooperation between 9 academic groups, 2 public research institutes, and 7 industrial groups will enable young researchers to get insight into the research and development procedures and also to get into contact with potential future employers.

### PhD project at the University of Milan

PhD Project Title: Design and synthesis of trifunctional peptidomimetic scaffolds for DNA-Encoded Chemical Libraries (DECLs) in the oncology area.

PhD Project description: The PhD student (ESR) will be involved in the design and synthesis of peptidomimetic compounds as ligands for clinically-relevant tumor-associated antigens. The ligand design will be directed by screening of DNA-encoded chemical libraries (DECLs) as well as by literature data. *In vitro* binding affinity studies of the newly synthesized compounds for the cognate antigens will validate potential hits for further development.

Planned secondments: Phibchem AG, Otelfingen (CH), 7 months.

Further information can be found here: [www.magicbullet-reloaded.eu](http://www.magicbullet-reloaded.eu)

### Academic Supervisor

Prof. Dr. Cesare Gennari, Università degli Studi di Milano, Dipartimento di Chimica

Website: <https://sites.unimi.it/gennarigroup/cesare-gennari/>

### Eligibility and salary

The position is open to candidates of any nationality, as long as they fulfill the requirements set for the ESRs funded by Marie Skłodowska-Curie actions:

- (1) Candidates who have already obtained a Ph.D. degree, or have more than 4 years of research activity (from the date when they have obtained a University diploma giving access to doctoral studies), are NOT eligible.
- (2) Researchers must NOT have resided or carried out their main activity (work, studies, etc.) in Italy for more than 12 months in the 3 years immediately prior to the date of appointment.

The salary of the ESRs will be paid according to the Marie Skłodowska-Curie action rules. For more information: [https://ec.europa.eu/research/participants/data/ref/h2020/other/guides\\_for\\_applicants/h2020-guide-appl-msca-itn\\_en.pdf](https://ec.europa.eu/research/participants/data/ref/h2020/other/guides_for_applicants/h2020-guide-appl-msca-itn_en.pdf).

### Required Academic degree / Desired experience

The applicants must have acquired a University diploma giving access to doctoral studies in Chemistry in the Country where the diploma was earned (typically a Master degree in Chemistry or Medicinal Chemistry).

The ideal candidate must have a strong background and practical experience in synthetic organic chemistry, documented by her/his MSc thesis.

More specifically, very important skills that will be considered are the following:

- ✓ practical experience in analytical methods (NMR, MS, HPLC);
- ✓ excellent knowledge of the English language (comprehension, speaking and writing);
- ✓ good abilities in scientific writing (reports, manuscripts);
- ✓ team-oriented and cooperative working attitude;
- ✓ motivation and willingness to spend 7 months on secondment in another research group;
- ✓ motivation and willingness to present scientific results in conferences and to publish in scientific journals.

Preferable additional qualifications that will be considered: background in medicinal chemistry and biochemical assays.

### Applications

Instructions on how to apply can be found at the following website:

<https://www.uni-bielefeld.de/chemie/oc3sewald/magicbullet-reloaded/positions.html>

Applications should be submitted via e-mail (e-mail address: [magicbullet@uni-bielefeld.de](mailto:magicbullet@uni-bielefeld.de)) and include the following documents (in English):

- ✓ Filled **application form** (where the applicant is expected to indicate preferences for up to 3 PhD positions within the network). Application forms can be downloaded at the above mentioned link;
- ✓ **Curriculum vitae** including relevant skills, experience and publication list;
- ✓ **Motivation letter** (1 page);
- ✓ **University transcripts and certificates**: Bachelor and Master degrees. For EU Countries, the Diploma Supplement is recommended, see: [http://ec.europa.eu/education/tools/diploma-supplement\\_en.htm](http://ec.europa.eu/education/tools/diploma-supplement_en.htm);
- ✓ **University entrance diploma**.

In addition, **two reference letters** are required. The applicant should ask her/his referees to send the letters separately and confidentially to the above e-mail address: [magicbullet@uni-bielefeld.de](mailto:magicbullet@uni-bielefeld.de).

The same e-mail address can also be used for informal enquiries regarding the project and the application procedure.

**Deadline:** the applications and the letters of recommendation sent by the referees must be received by December 31, 2019.

**Skype interviews** will be organized for short-listed applicants in the period 7-24 January 2020.

**Ranking of the applicants and recruitment of the selected candidate:** 27 January – 5 February 2020.

**Start date:** The expected start date of the fellowship is 1 April 2020.