

POSTDOCTORAL POSITION AVAILABLE (18 MONTHS) - STARTING DATE 01/02/2021

MECHANOCHEMICAL SYNTHESIS OF ACTIVE PHARMACEUTICAL INGREDIENTS (APIs)

POSITION SUMMARY

Post-Doc Position in the field of mechanochemistry applied to organic/medicinal chemistry (medicinal mechanochemistry). *Project acronym*: MECH-API. Full-time, temporary employment. The position is limited to a maximum of 18 months.

CONTEXT

We are looking for a Post-Doc who wants to contribute to the allow successful delivery of APIs by the use of novel technologies such as mechanochemistry, identified by IUPAC as one of the ten top emerging technologies that will change the world. A unique opportunity for you to work in a scientific area of great importance, innovative and disruptive, in a setting at the interface with the industrial needs and in close interactions with excellent academic groups members of the European COST Action CA18112 Mechanochemistry for Sustainable Industry (MechSustInd, www.mechsustind.eu).

MAIN TASKS

Postdoc position will work under the responsibility of Dr. Evelina Colacino, who focuses on the development of sustainable methodologies for organic synthesis, with a special attention to the preparation of value-added compounds for the pharmaceutical industry, from laboratory to large-scale.

RESEARCH ACTIVITIES

As a Post-Doc, you will deal with the synthesis and development of APIs and their characterization (including at the solid state). Your main research objectives will be to propose and design straightforward access (meaning specifically route scouting) to APIs by mechanochemistry, in alternative to solution-based procedures and to improve the ecological footprint of each synthesis at laboratory and large scales. The daily synthesis work will be performed at the Université de Montpellier (Charles Gerhardt Institute of Montpellier, ICGM) in France.

The research activity will mainly focus on:

- Design of scalable and green routes for APIs
- Preparation of APIs by mechanochemistry and investigation of the mechanochemical process parameters to access them in batch and by 'parallel mechanochemistry' at laboratory scale;
- Translate the batch processes to continuous manufacturing at large scale by reactive extrusion (twin screw extrusion and case studies).
- Solid state characterization of each APIs for both batch and continuous process;
- Process development to access new pharmaceutical forms.

QUALIFICATIONS and CANDIDATE PROFILE

To qualify for the position of Post-Doc, you must have a doctoral degree in a relevant field such as medicinal chemistry and preparative organic chemistry. Experience in mechanochemistry is considered meritorious for this position, but not compulsory.

We are looking for you who can work independently but also in close collaboration with the group members and as a part of the European Program COST Action CA18112 Mechanochemistry for Sustainable Industry (MechSustInd, www.mechsustind.eu). You can plan and organize your own work, take your own initiatives and responsibility, be analytical and creative and be able to deliver results in time. You also need to be able to report to the founders, hence, need good communication skills and an interest for multidisciplinary research.

The position requires sound verbal and written communication skills in English.

Remuneration: 2584.16 euros monthly gross salary.

TO APPLY

To apply send by e-mail your application to Evelina COLACINO: evelina.colacino@umontpellier.fr

The application should be marked with Ref. MECH-API and written in English. The application should be sent electronically and be attached as pdf-files, as below:

CV: *(Please name the document as: CV, Surname, Ref. MECH-API)* including:

- CV, include complete list of publications;
- Name and contact details of three references.

Personal letter: *(Please name the document as: Personal letter, Family name, Ref. MECH-API)* 1-3 pages where you:

- Introduce yourself
- Describe your previous research fields and main research results
- Describe your future goals and future research focus

Deadline for application: 30th November 2020