

UNIVERSITE D'ANGERS
UNIT

MINT Laboratory/IBS-CHU Angers

Junior Contract Researcher
Post-doctoral contract in public law

Category : A

Présentation de l'Université d'Angers

In the heart of a region recognized for its quality of life, the University of Angers, the 3rd largest employer in the region, offers an environment conducive to the development of its staff and students. The UA is a multidisciplinary university, welcoming more than 25,000 students spread over 3 campuses and 2 relocated campuses (in Cholet and Saumur). It has 8 components (5 UFR, 1 IUT, 1 internal engineering school and 1 internal business and management school), and 31 federative research units and structures. Thanks to the many innovative projects it carries out and its openness to the world, the UA allows everyone to evolve in a stimulating environment. Its annual budget is €156 million (including €123 million in payroll). The UA has 1134 teachers and teacher-researchers, 882 administrative and technical staff and nearly 2000 individual contractors and is looking for involved and daring actors. You recognize yourself in this job offer ? Join us !

Caractéristiques du contrat :

Starting date : May 2023

Contract duration : 12 months French law work contract

Work quota : 100%

Monthly wage : 2947,02€ gross

Location : Angers University, MINT Laboratory // IBS-CHU ANGERS

Nom du projet de recherche : Lipid nanocapsules based on polyoxazolines for drug delivery and diagnostic (LNC-Pox)

Description of the research project in which the research activities entrusted to the officer take place:

A Post-Doc position is available in the MINT laboratory of the University of Angers (UMR INSERM U1066 // UMR CNRS 6021) and this project will be developed in collaboration with MOLTECH-Anjou Laboratory of the University of Angers (UMR CNRS 6200).

The project will focus on the development of polymeric materials to meet the needs of medicine for diagnostic and therapeutic approaches, essentially in cancer treatment. The development of new Drug Delivery Systems (DDS) has potential in multiple targeting functionalization, *in vitro* and *in vivo* imaging, with the incorporation of stimulus-responsive materials. In this context, polymers represent an important class of materials that can be used for the preparation of organic DDS due to their abilities to encapsulate and to respond to specific stimuli in order to deliver the drug to a targeted region. In this context, stimuli-responsive polymers known as "smart materials" have greater potential than traditional delivery systems as they can respond to internal or external stimuli to potentiate the efficacy of the nanomedicine.

The project will focus on development of Drug Delivery Systems as Lipid NanoCapsules (LNCs) based on new amphiphilic polymers possessing fluorescent probes as markers.

Provisional project schedule: May 2023– October 2024

Definition of research activities and tasks to be accomplished:

The selected candidate will perform synthesis, spectroscopic, physico-chemical characterizations of amphiphilic polymers based on polyoxazolines, and dyes derivatives for their grafting on these polymers. He(he) will also develop the applications of these polymers in nanoemulsion formulations as nanovectors for drug delivery.

The candidate will:

- conduct, develop and manage a research topic in the frame of the *LNC-Pox* project,
- have possibility to supervise early stage researchers,
- contribute to the writing of publications from research results,
- present the results in reports and during MINT meetings, national or international conferences.

Expected skills :

Knowledge :

- Organic and polymer chemistry
- Physico-chemical Characterizations
- Fundamentals in photochemistry
- Good level in written and spoken English

Know-how:

- Organic synthesis
- Polymer synthesis
- Characterizations (NMR, MS, UV-Vis, SEC)
- Fluorescence techniques (and possibly experience) to perform cellular experiments including fluorescence microscopy
- Use Chem Draw, Origin, End Note or Zotero software
- Bibliographic research

Soft skills:

- Work in a team
- Interested in working at the interface of polymer chemistry, the physical chemistry of polymers, and nanomedicine
- Autonomy
- Ability to communicate
- Capacity to analyze and synthesize
- Motivation

Qualifications

PHD degree of less than 3 years

Specialty : in Polymer Chemistry or Organic Chemistry

Modalités du recrutement et contact

You must submit your CV, cover letter and doctoral degree by mail at : oksana.krupka@univ-angers.fr copy to : recrutement@univ-angers.fr

Deadline for applications: February 17th 2023

This job description is available until the closing date for applications. On that date, it will no longer be available on the site.

Optionally, your contact for any further information: at 02 44 68 85 59 or oksana.krupka@univ-angers.fr