

UNIVERSITE D'ANGERS
MINT

Intitulé du poste :

Chercheur contractuel junior
Contrat post-doctoral de droit public

Catégorie : A

Presentation of the University of 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 AU 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 !

Contract features :

Starting date : June 2025

Contract duration : 12 months

Work quota : 100%

Monthly wage : 2 950 euros gross

Location : Université d'Angers, Laboratoire MINT // IBS-CHU ANGERS

Name of the research project: Nanoparticles based on polyoxazolines for drug delivery and diagnostic

Description du projet de recherche dans lesquels s'inscrivent les activités de recherche confiées à l'agent :

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).

This project focuses on the development of polyoxazoline-based nanoparticles for advanced drug delivery and diagnostic applications, particularly in cancer treatment. The work will involve the design and synthesis of novel multifunctional polymeric materials for drug delivery systems (DDS), integrating targeted functionalization and stimulus-responsive properties. These systems aim to enhance in vitro and in vivo imaging while ensuring precise drug release at specific disease sites, improving therapeutic efficacy and minimizing side effects.

A key aspect of the project is the development of polymeric-based nanoparticles (NPs) and Lipid NanoCapsules (LNCs) incorporating functionalized polyoxazolines. These hybrid nanocarriers will be engineered to integrate fluorescent probes for imaging, targeting molecules for selective delivery, and prodrug fragments for controlled drug activation. Their potential in theranostic applications—combining therapy and diagnostics—will be extensively explored.

Provisional project schedule: 1^{er} Juin 2025– 31 Mai 2026 (12 mois)

Definition of research activities and tasks to be performed :

The selected candidate will perform synthesis, spectroscopic, physico-chemical characterizations of polymers based on polyoxazolines, and fluorescent dyes. He/she will also develop the applications of these polymers in NPs and LNC formulations.

The candidate will:

- conduct, develop and manage a research topic in the frame of the *Nano-POx* project;
- have possibility to supervise early stage researchers;
- contribute to the writing of publications from research results;
- present the results 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
- Speciality : Polymer Chemistry or Organic Chemistry

Recruitment procedures and 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: April 16th 2025

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