

Research Engineer – Post-Doc Position

Physico-chemical characterization, formulation, understanding of products for human tissue applications

LERAM is a joint laboratory between Laboratoires URGO, based in Chenôve (21), and the research laboratory IPREM (UMR UPPA/CNRS 5254) located in Pau (64).

We offer a post-doc position with one-year fixed-term contract, renewable for one year, to a doctor specialized in the field of polymers. The post-doc position is located in Pau within the academic laboratory; exchanges and occasional trips will be planned with URGO Laboratories.

The research work concerns two specific aspects:

- **To deepen technical applications of films elaborated with microgels used in the laboratory.** The deposition of these films on human skin and mucous membranes will be the focus of the study. As such, it is necessary to improve the global knowledge of these microgel films from the point of view of their rheological properties, adhesion vs their structure. It will be necessary to explore the possibility of formulating them in order to achieve target properties. A reflection on the manufacture of these microgels could also be undertaken in order to optimize the process.
- **Characterization of emulsions.** The addition of film-forming polymers to a conventional cream base allows the formation of a film with good spreading. The stability of the emulsion will be analysed (rheology in particular) with regard to the level of polymer required in the formulation. A study on the residual stickiness which persists and the hold on the skin will also be carried out.

Each of the subjects requires skills in polymer physics, formulation, polymer physico-chemistry, rheology in liquid and solid state, polymer characterization. Thus the candidate, ideally through his/her thesis experience and internships or jobs in the field, will be able to justify his/her good knowledge of the broad field of polymers and their formulation. Relational skills, autonomy, rigour and strength of proposal will also be necessary to successfully complete the proposed work.

Motivation letter and CV should be sent to Christophe DERAİL (christophe.derail@univ-pau.fr), director of LERAM.

<https://iprem.univ-pau.fr/fr/index.html>

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