



Predocctoral researcher position @ Vrije Universiteit Brussel, Brussels, Belgium

Topic: Peptide Hydrogels.

Hydrogels are part of the modern drug delivery platforms and tissue regeneration. One important route towards slow release drug delivery and 'soft' media for cell proliferation involves the encapsulation of therapeutics/cells into hydrogels. At ORGC, short hydrogel-forming α -peptides (containing unmodified natural amino acids) were developed. Currently, the study of their physicochemical (rheology, IR, CryoTEM) and pharmacological profiles (e.g. cytotoxicity, *in vitro* and *in vivo* active compound release) is ongoing. The project aims at the establishment of relationships between peptide/gel structure and drug release profiles. The proposed project covers the synthesis of novel gel-forming peptides, material analysis of the resulting gels, and subsequent investigation involving both *in vitro* work (toxicity, drug-gel compatibility, drug release) and *in vivo* efforts (drug release, imaging).

Job description:

- The candidate will actively participate in the research project to propose synthesis schemes and prepare the various compounds in the required amount and purity (i.e. main task);
- The candidate will actively participate in the assessment of the synthetic feasibility of the above-mentioned compounds, based on the study of literature precedents;
- The candidate will also be involved in the *in vitro* and *in vivo* experiments.

Your profile:

- You have experience in synthetic organic chemistry;
- Experience in peptide synthesis is a plus;
- You have experience in the purification and structural determination of organic compounds;
- You are motivated and like to work in a highly dynamic and multidisciplinary team.

We offer:

- one-year contracts, yearly extendable for a 4-year period, starting preferable as soon as possible;
- A salary or scholarship according to the official rates determined by the university, which includes social security.

Interested?

For applications, please send your CV and a letter of recommendation by e-mail to steven.ballet@vub.be (tel. +32 2 629 32 92)