



Annnonce d'ouverture de stage Master M2

Title: Molecular modelling of nanoparticles for drug delivery

Description:

Formulation of drugs in nanoparticles is a major research field in pharmaceutical sciences. The identification of optimal drug – polymer matrix matches is a critical step in the development of such formulations. The proposed internship project is integrated in the establishment of novel in silico approaches in our department to support the design of nanoparticles for drug delivery by molecular modelling. The project requires parameterization of coarse-grain models and modelling amphiphilic co-polymer self-assembly in aqueous media (see e.g. G. Srinivas et al. *J. Phys. Chem. B* **2004**, *108*, 8153). The successful candidate will use molecular dynamics simulations with Gromacs and Desmond molecular dynamics codes.

Benefit to internship student:

Practical experience in small molecule and polymer modelling to support drug-nanoparticle formulation; insight into industrial applied research in a well-established, experienced team in the department Structure, Design, and Informatics; the results of the project will be published in peer-reviewed journals; the candidate will have an opportunity to interact with people from Marie-Curie Initial Training Network “NANODRUG” (<http://www.nanodrug.qmul.ac.uk/project.html>)

Requirements:

Master M2 level with knowledge in molecular modelling, computational and physical chemistry acquired during university course work and internships; basic knowledge in programming, scripting, and computing; good scientific English (oral & written communication); autonomous and pro-active mind-set.

Length of internship, envisioned start & localization:

6 month starting in January/February 2014; Vitry-sur-Seine. Supervisors: Dr. Andrey FROLOV and Dr. Anke STEINMETZ.

Interested candidates, please, address Curriculum Vitae and letter of motivation to:

Mr. Andrey FROLOV, PhD

Marie Curie postdoctoral fellow (ITN “NANODRUG”)

Sanofi R&D

Lead Generation to Compound Realisation

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