

COMPUTATIONAL DESIGN OF ARTIFICIAL RECEPTOR PROTEINS

(Ref. BAP-2017-397)

For the Biochemistry, Molecular and Structural Biology Section we are looking for a highly motivated doctoral researcher who will perform scientific research and contribute to didactic tasks within the division.

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The laboratory of biomolecular modelling and design (<https://www.chem.kuleuven.be/lbmd>) has an expertise in biomolecular modelling, structural bioinformatics as well as experimental biophysics and protein crystallography. Our focus is on the rational design of novel bio-active molecules such as small molecule drugs (including protein-protein interaction targets and nuclear receptors) or novel proteins (with applications ranging from catalysis to bionanotechnology and biopharmaceuticals) via computational and experimental methods.

Project

In this PhD project, we are currently looking to redesign nuclear receptors, a common drug target for a variety of diseases, to bind a novel ligand in order to establish an orthogonal signalling pathway for synthetic biology applications but also to understand the mechanism of these class of receptors which may help to identify novel therapeutic strategies. In this project, you will mainly apply computational methods (molecular dynamics, computational protein design relying on the Rosetta protein modelling suite, computational drug design methods, pharmacophore modelling and cheminformatics). Experimental work may also be performed at our collaborators experimental laboratory.

Profile

- You have a masters degree in Bio-Engineering, Biology, Biochemistry, Biomedical or Pharmaceutical sciences with a passion for scientific research, in particular computational protein and drug design as well as structural biology. Experiences in this field is an asset.
- You have experiences with Linux, Python and/or R.
- You are proficient in English, both speaking and writing.
- You are a team-player but can also work independently, and take initiative.
- You are prepared and motivate to learn novel computational and experimental methods, and stay up to date with literature.
- You are capable to successfully complete the doctoral training and research under supervision of an advisor.

Offer

We offer a fulltime scholar ship tentatively starting 1 October 2017. After a positive evaluation, the first year, the fellowship will be extended to a total of 4 years, leading to a doctoral thesis.

Interested?

For more information please contact Prof. Dr. Arnout Voet, tel.: +32 16 32 44 96, mail: arnout.voet@kuleuven.be.

You can apply for this job no later than September 30, 2017 via the [online application tool](#)

<https://icts.kuleuven.be/apps/jobsite/vacatures/54249555?lang=en>