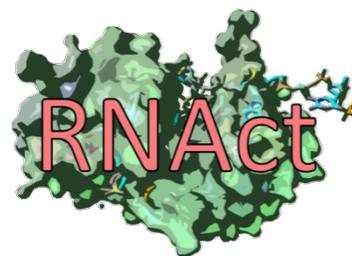




Ph.D. position (Ref: RNAct ESR2)



## Improving the in-silico structure representation of proteins

**Domain:** Structural bioinformatics; computational biology; methods development; machine learning

**Keywords:** protein sequence-based prediction; protein design; protein biophysics

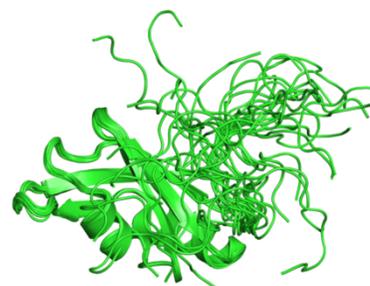
**Promotor:** Wim Vranken (<http://we.vub.ac.be/nl/wim-vranken>; <http://bio2byte.be/people/2>)

**Starting date:** 1<sup>st</sup> of September 2019, for a period of 3 + 1 years

**Location:** Bio2Byte group (<http://bio2byte.be/>); (IB)<sup>2</sup> (<http://ibsquare.be/>); VUB, Brussels, Belgium.

**Funding:** H2020-MSC-ITN project RNAct (<http://rnact.eu/>)

In this Ph.D. project, you will work to improve the representation of conformational variability in protein structure models. This will happen in conjunction with sequence-based prediction approaches and experimental data from NMR. The final aim is to make the protein structure models more informative, so increasing their potential for other computational approaches, such as docking. This is particularly important in the RNAct project, as we want to have the best possible three-dimensional representation of the RNA recognition motif (RRM) proteins in order perform in-silico RNA docking.



Besides the work in Brussels, you will spend a 3 month secondment at the HMGU (Munich, Germany) to learn about experimental structural biology, and a 1 month secondment at Giotto (Firenze, Italy) to gain insights in NMR data used in protein structure calculations.

The project is part of a computational/experimental EU MSCA-ITN project with a total of 10 Ph.D. students, and is highly interdisciplinary. Good programming skills (preferentially Python and/or C++) are essential, with knowledge of structural biology essential. Skills in machine learning/artificial intelligence and in discrete mathematics and statistics are highly desirable. Candidates must be motivated to learn about all disciplines relevant to the project.

Candidates must be fluent in English.

**Further information:** <http://rnact.eu>

**Contact and information:** e-mail to [info@rnact.eu](mailto:info@rnact.eu)

**Applications must be submitted online at** <https://tinyurl.com/rnact-eu>, select ESR2.

**Eligibility conditions apply, check the application website.**

**Deadline for applications: 15/03/2019.**