

## A physical phenomenon with high relevance for schizophrenia

There is an opening (autumn 2010) for a student with a strong academic background to pursue a PhD within the Research Programme on Biomedical Informatics (GRIB, <http://grib.imim.es>) at the Universitat Pompeu Fabra in the Barcelona Research Park of Biomedicine (PRBB, <http://www.prbb.org>).

We are searching for a highly motivated person to study G protein coupled receptor(GPCR) dimerisation using accelerated molecular dynamics achieving supercomputing scale performance in the microsecond regime. GPCR functioning in dimers has been implicated to play an important role in mental disorders (e.g. schizophrenia). Understanding this physical phenomenon will help to identify novel drug targets and lead structures, an urgent need in antipsychotic drug discovery.

The work implies a close collaboration with the group of Dr. Gianni De Fabritiis ( <http://multiscal.elab.org> ) as well as using the unique worldwide distributed computing infrastructure (GPUGRID, [www.gpugrid.net](http://www.gpugrid.net) ).

Candidates should have a background in chemistry, physics, biology, or related disciplines and should have a strong interest in computer simulations. Preferentially, the applicant has demonstrable research experience in molecular dynamics simulations of proteins. Excellent English skills are a pre-requisite.

We offer participation at international conferences and advanced training in different fields of simulation technology.

Applications (CV, degree certificates, references, publication list, letter of motivation) should be sent directly to Assoc. Prof. Dr. Jana Selent ( [jana.selent@upf.edu](mailto:jana.selent@upf.edu) , [www.jana-selent.org](http://www.jana-selent.org) ) to arrive not later than October 15, 2010.

References: Bruno, A.; Guadix, A. E.; Costantino, G. Journal of Chemical Information and Modeling 2009, 49, 1602-1616. Multiscalelab molecular dynamics simulations: <http://vimeo.com/user862246/videos>

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