

## Resolving ligand binding mechanisms in peptide transporters

A highly motivated biological magnetic resonance spectroscopist is sought to join a mature project to combine crystallography and solid state NMR to define structure and function of peptide transporters, jointly supervised between Tony Watts (<http://www.bioch.ox.ac.uk/~awatts/>) and Simon Newstead (<https://www.bioch.ox.ac.uk/research/newstead>) in the Biochemistry Department, University of Oxford, UK.

Experience of solid state NMR and/or ESR DEER, and other biophysical techniques with membrane systems, as well as specialized sample production for spectroscopic investigations, is essential. Familiarity with other structural biology techniques and their extension into biochemical functional descriptions is desirable. Knowledge of membrane transport assays using liposome based systems and experience of functional assays, would be an advantage.

The post holder will have primary responsibility for the project work, including planning and managing the research project. The post holder will also contribute to the general smooth running of the laboratory and will be expected to help with training and teaching within the laboratory.

Specific tasks include:

- Preparing recombinant prokaryotic peptide transporters in a suitable form for spectroscopic and other biophysical studies.
- Analysing spectroscopic data to resolve structure-function information.
- Biochemical analysis of protein function, including *in vitro* reconstitution of membrane transporters.
- Designing and chemical labelling of specific mutants for NMR and/or EPR spectroscopy.
- Writing papers for publication and for presenting at conferences and seminars.
- Working as part of a multidisciplinary team in collaboration with another laboratory.
- Participation in laboratory meetings

Applicants should possess or expect to obtain soon, a PhD in Biochemistry or a related area. Funding (BBSRC is the funding body) is available for 2 years (start date asap), upon satisfactory completion of a 3 month probationary period.

For more details, please contact Tony Watts ([anthony.watts@bioch.ox.ac.uk](mailto:anthony.watts@bioch.ox.ac.uk))