

**Patrick Groves**  
**Molecular Interactions and NMR**

A brief overview of my research interests are given in the Institute's webpages  
(<http://www.itqb.unl.pt/research/biological-chemistry/molecular-interactions-and-nmr>)

**Short term position, suitable for 2-3 month**

One of the groups' tasks is to analyze samples brought to us by collaborators using TR-NMR methods. These methods include diffusion measurements and STD – methods commonly used by the pharmaceutical industry in drug design. The projects involve the preparation of suitable NMR samples from the supplied materials, acquisition of data, processing and analysis of data. This project is ideal for collaboration where you bring your own protein and/or ligand for study (although we usually have a few examples in the lab).

**Short term position, suitable for 2-3 months**

One of the group's specialties is the measurement of diffusion coefficients by NMR. Polyethylene glycol (PEG) molecular weight standards can be used to calibrate the NMR instrument and have the advantage of being soluble in a wide range of solvents, including mixed solvents. PEGs also give a single, sharp peak in the NMR spectrum. Therefore, the aim of the project is to define PEGs as the standards of choice when monitoring molecules in mixed solvents. The project involves the preparation of NMR samples, acquisition of data, processing and analysis of data.