As part of the Federal Budget 2009/10 funding was announced for Super Science Fellowships.

Fellowships will be offered in three areas of existing research strength:
1. Space science and astronomy;  
2. Marine and climate science; and  
3. Future industries research – biotechnology and nanotechnology.

Within the above categories the University of Western Sydney has expertise and research strength in the following areas and will be seeking strong applicants for fellowships to work in these areas.

**Biotechnology**
- Novel microencapsulation technologies for controlled release of bioactives and nutrients  
- Development of super bacterial strains for improving health  
- New fermentation techniques for development of nutraceuticals and functional foods  
- Bioprocessing of food industrial waste into functional ingredients  
- Developing new drugs therapies for cancer.  
- Developing new antibacterial agents.

**Climate Change**
- Implications of climate change for soil microbial diversity and nutrient cycling processes  
- Monitoring of changes in rainfall patterns and how this affects tree structure and function.  
- Developing a predictive understanding of the growth and carbon storage potential and productivity of both managed and unmanaged eucalypt forests

**Nanotechnology**
- Molecular mechanisms of ionic conduction (e.g., in lithium battery electrolytes).  
- Protein association and crystallisation.  
- Effects of macromolecular crowding on molecular association.  
- Theoretical/experimental studies of restricted diffusion in porous media.  
- Solution dynamics and self-association in aqueous solutions.  
- Development of sophisticated NMR and MRI techniques for studying molecular dynamics  
- Interrogating drug-macromolecular interactions  
- Development of new techniques to investigate drug interactions  
- Investigating the mechanism of action of drugs  
- Carbon Nanotubes  
- Nanocomposites,  
- Nano-catalysts for biofuels  
- Nano-graphites for Ultrabatteries.

If you are interested in applying for a Super Science Fellowship in any of the above areas, please forward a copy of your current CV to Tanya Hobson (Executive Officer, Pro Vice-Chancellor (Research), who will ensure that you receive any relevant information when applications are called for.