

Project proposal template – Faculty studentships Summer 2014

Project proposal template – Faculty studentships Summer 2014			
<i>Project title</i>	<input style="width: 90%;" type="text" value="Investigating the physiological role of azoreductases in Pseudomonas aeruginosa"/>	<i>Director of Study</i>	<input style="width: 90%;" type="text" value="Dr Ali Ryan"/>
<i>Second Supervisor</i>	<input style="width: 90%;" type="text" value="Prof Mark Fielder"/>	<i>School</i>	<input style="width: 90%;" type="text" value="Life Sciences"/>
<i>Other members of supervisory team</i>	<input style="width: 90%;" type="text" value="Prof Edith Sim"/>	<i>Any requirements from applicant (eg degree in specific subject area)</i>	<input style="width: 90%;" type="text"/>
Project summary (max 1,000 characters)			
<p><i>P. aeruginosa</i> is a pathogenic bacteria which is a common cause of nosocomial infections and a major source of morbidity in cystic fibrosis patients. <i>P. aeruginosa</i> is naturally resistant to a range of common antibiotics and strains resistant to all current therapies are already appearing.</p> <p>Azoreductases are a group of enzymes found ubiquitously in bacteria. They are broad spectrum reductases whose physiological substrate has yet to be identified. Clinical and laboratory strains of <i>P. aeruginosa</i> lacking azoreductase genes have been shown to be impaired in their ability to infect mice. As a result azoreductases are an interesting target for novel antimicrobial therapies.</p> <p>The aim of this project will be to determine what role these enzymes play in the bacteria. The student will work as part of an on-going international collaboration to study this problem. This study will use a range of molecular and microbiology techniques to investigate this question.</p>			