



<b>Position Title</b>	PhD Studentship - Design and synthesis of new biomimetic materials with tunable biodistribution profiles, as conjugates to RNAs in gene therapy
<b>Project Abstract</b>	<p>Gene silencing using siRNA (small interfering RNA) provides the opportunity to design a new generation of therapeutics capable of treating a wide range of diseases with high unmet clinical needs. The major barrier to translation of this concept into the clinic, and the <b>rationale for this project</b>, is the lack of nontoxic, biocompatible materials capable of producing nano-complexes with nucleic acids which can be manufactured to consistent quality, ensure delivery to the diseased site and achieve the required duration of activity.</p> <p>Chemically modified cyclodextrins (CDs), are uniquely capable of assembly into nanoparticles and because of mesomolecular size can do so even as conjugates to large biomolecules including oligonucleotides. Of particular interest is the recent 'proof of concept' data showing; (i) CD.siRNA covalent conjugates retain the gene silencing efficacy of the unconjugated siRNA, and (ii) CD.siRNA nanoparticles can be tagged with antibody fragments (FAB) to achieve specific cell targeting.</p> <p>The <b>aim of this project</b> is to unite these 2 technologies to produce therapeutic conjugates of siRNA for the treatment of Leukaemia.</p>
<b>Experience</b>	The PhD position is funded for 4 years, including a monthly stipend and materials and travel budget. Applicants should hold a minimum of an honours bachelor's degree at 2:1 level or equivalent in a relevant subject such as Pharmacy, Chemistry, Bioengineering. Candidates should also have a strong interest in clinical translation of materials and Biomaterials.
<b>Funding</b>	The studentship will cover fees up to €5,500 pa and a stipend of €18,500 pa
<b>Location</b>	University College Cork
<b>Closing Date</b>	Friday 29 <sup>th</sup> June 2018
<b>For more information contact</b>	Professor Caitriona O'Driscoll, Prof and Chair of Pharmaceutics, UCC, <a href="mailto:caitriona.odriscoll@ucc.ie">caitriona.odriscoll@ucc.ie</a>

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