

## Job Description

**Job title: Post-Doctoral Medicinal Chemistry Fellow (KTP Associate) – Development of Green Chemistry Methods for the Synthesis of Anticancer compounds**

**Faculty/Directorate: Health and Life Sciences**

**Grade: E**

**Full time (1.0 FTE)**

**Fixed term: 36 months**

	Duties of the role
<b>Overall purpose of the role</b>	<p>Fluid Science Limited and De Montfort University are working as partners on a Knowledge Transfer Partnership (KTP) project to use green chemistry techniques to develop and manufacture sustainable anticancer compounds at affordable rates.</p> <p>This partnership requires a specialised Associate to manage the project workplan to develop Fluid Science R&amp;D capabilities to accelerate the discovery, formulation and launch of new cancer agents based on lead-compounds previously discovered at De Montfort University.</p> <p>The associate will work under guidance of supervisors from both sides of the partnership to apply and impart organic and medicinal chemistry knowledge to produce anticancer compounds and biosensors using Green Chemistry principles, thus meeting the strategic goals of Fluid Science to become a key market player in the cancer drug discovery area.</p>
<b>Main duties and responsibilities</b>	<ul style="list-style-type: none"> <li>• Undertake project workplan including optimisation of chemical reaction conditions and overcoming challenges related to the scale up synthesis of the target compounds, thus ensuring high quality deliverables</li> <li>• Use of modern organic chemistry and analytic techniques with initiative and problem-solving to implement new knowledge desired at Fluid Science focused on green chemistry manufacturing processes of cancer compounds</li> <li>• Work in a medicinal chemistry laboratory safely and independently;</li> <li>• Operate lab equipment and master analytical chemistry techniques, such as NMR and IR spectroscopy, HPLC, liquid-chromatography mass spectrometry, and spectrofluorometer instruments;</li> <li>• Work effectively as part of multi-disciplinary team including other medicinal and synthetic chemists at De Montfort University and with project team at Fluid Science, and any stakeholders</li> <li>• Analyse and interpret data and project outcomes to make proposals for next stages and new commercially viable products for Fluid Science</li> <li>• Write up project outcomes, contributing to the writing of reports and publications. Present progress and outcomes to project team, funders and any other stakeholders.</li> <li>• Manage project activity, continually revising workplan tasks and timeline.</li> </ul>

	Duties of the role
	<ul style="list-style-type: none"> <li>• Manage travel and subsistence, consumables and development budgets. Deliver project to budget, time and quality requirements</li> <li>• Undertake training and development activities to increase knowledge and skills and enhance project outcomes</li> <li>• Perform any other duties commensurate with the job role &amp; grade as reasonably required from time to time.</li> </ul> <p>In relation to equality and diversity:</p> <ul style="list-style-type: none"> <li>• Treat all Fluid Science &amp; DMU staff, students, contractors and visitors with dignity and respect. Provide a service that complies with the Equality Act 2010, eliminating unlawful discrimination, advancing equality of opportunity and fostering good relations with particular attention to the protected characteristics of age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief (or none), sex and sexual orientation.</li> <li>• All members of staff are responsible for their contribution to improved environmental performance and in reducing greenhouse gas emissions at DMU. It is therefore required that all members of staff are aware of how the Environmental Policy relates to their own role at the University. Staff conduct must reflect the values inherent in the Environmental Policy and where required staff must cooperate with environmental compliance and conformance requirements to help minimise our emissions to air, water and land.</li> </ul>

# Person Specification

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Area of responsibility	Requirements	Essential or desirable		*Method of assessment			
				A	I	T	D
<b>R&amp;D/Project Workplan Delivery</b>	PhD in organic chemistry, medicinal chemistry or closely related discipline	Essential		X	X		X
	Expertise in modern methods of organic synthesis and familiarity with medicinal chemistry concepts. Expert in multi-step synthesis and chemical characterisation of high- and low-molecular weight antimicrobial and anticancer compounds Evidence for creative problem solving in synthetic organic chemistry	Essential		X	X		X
	Interest in cancer therapy and green chemistry principles applied to synthesis of bio-active compounds		Desirable		X	X	
	Ability to operate and maintain synthetic laboratory equipment and lab facilities	Essential		X	X		
	Highly competent with organic chemistry purification and characterisation techniques and their applications e.g., silica chromatography, HPLC, NMR, MS	Essential		X	X		X
	Familiarity with chemistry-related software including structure-drawing tools and literature/database searching engines and their use to inform the design of new organic compounds	Essential		X	X		
	Highly competent with the use of analytical software-associated techniques	Essential		X	X		
<b>Project Management</b>	Has good time management and organisation skills meeting tight deadlines	Essential		X	X		
	Able to work adaptably; prioritising workload and using problem-solving and initiative.	Essential		X	X		
	Experience managing budgets		Desirable	X	X		

Area of responsibility	Requirements	Essential or desirable		*Method of assessment			
				A	I	T	D
	Mentor and support junior members of the research team or undergraduate students, fostering a collaborative and innovative research environment.	Essential		X	X		
<b>Reporting and Communicating</b>	Experience presenting results both verbally and in written formats	Essential		X	X		X
	Experience presenting to a variety of stakeholders		Desirable	X	X		
	Contribute to the writing of scientific papers, patents, and reports that will be submitted to journals and conferences. Disseminate research findings within both academic and industrial settings	Essential		X	X		X
<b>Collaborative Working</b>	Able to work well in a team and on their own	Essential		X	X		X
	Excellent interpersonal skills and professional manner		Desirable		X		
<b>Our Values and Behaviours at DMU</b>							
<b>We are Collaborative</b> – we work together to get things done	We support each other to achieve joint outcomes	Essential			X		
	We understand how our work contributes to DMU						
	We are aware of our personal impact on others						
<b>We are honest and Compassionate</b>	We are open, honest and caring	Essential			X		
	We work on a trust basis						
	We hold ourselves accountable for our actions						
<b>We are innovative and Creative</b>	We constantly strive for better	Essential			X		
	We challenge bureaucracy and explore digital solutions						
	We are innovative and creative						
<b>We are a community</b> – we value and champion difference	We embrace alternative views	Essential			X		
	We treat others with respect						
	We tackle inequalities						

**\*A = Application Form; I = Interview; T = Test; D = Documentary Evidence**

Standard KTP criteria apply. The Knowledge Transfer Partnership (KTP) is a funded programme which enables the business to bring in new skills and the latest academic thinking to deliver a specific, strategic innovation project. The Associate is a graduate with the capability to lead the strategic business project.

A potential Associate should:

- be qualified with a qualification(s) and experience that matches the project delivery requirements
- not previously been employed or be currently employed by the Company Partner or an associated company
- have not previously been employed as a KTP Associate