

## Marie Curie Individual Fellow PROFILE FORM

Date: 09-06-2009

INFORMATION OF ORGANIZATION	
Name of organization	Solid State Pharmaceutical Cluster (University of Limerick)
Contact details of the main researcher	Name, Title: Kieran Hodnett, Prof. Tel.: +35361234629      Gender (M/F): M Fax: +35361213529 E-mail: jon.ohalloran@ul.ie Web: <a href="http://www.ul.ie/sspc">www.ul.ie/sspc</a>
Key group researchers and expertise (name, surname, academic degree)	Prof. Kieran Hodnett, B.Sc, Ph.D, D.Sc. – Crystallization & Polymorphism, University of Limerick. Prof. Ake Rasmuson, B.Eng., Ph.D. – Crystal Engineering & Nucleation, University of Limerick. Prof. Brian Glennon, B.E., Ph.D. - Crystal Engineering, University College Dublin. Prof. Pat McArdle, Ph.D, D.Sc.- Analytical Techniques, National University of Galway. Prof. Anita Maguire, B.Sc., Ph.D. – Organic Synthesis, University College Cork. Prof. Owen Corrigan, B.Sc. (Pharm), Ph.D. – Pharmacy – Preformulation, Trinity College Dublin Dr. Anne Marie Healy, B.Sc. (Pharm), Ph.D. Pharmacy – Preformulation, Trinity College Dublin Dr. Humphrey Moynihan, B.Sc., Ph.D. – Organic Chemistry & Crystallization, University College Cork. Dr. Patrick Frawley, B.Eng., Ph.D. – Molecular Modelling & Computational Fluid Dynamics, University of Limerick. Dr. Andrea Erxleben, Dipl.-Chem, Ph.D., Structure Characterisation, , National University of Galway. Dr. Alan Ryder, B.Sc., Ph.D., Chemometrics, National University of Galway. Dr. Simon Lawrence, B.Sc., Ph.D., Organic Chemistry & Crystallization, University College Cork. Dr. Abina Crean, B.Sc., Ph.D., Drug delivery systems & Solid State Engineering, University College Cork. Dr. Lidia Tajber, B.Sc., Ph.D. Pharmacy –Preformulation, Trinity College Dublin.
Organization type (tick all that apply)	<input checked="" type="checkbox"/> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> Non-profit <input checked="" type="checkbox"/> Research <input checked="" type="checkbox"/> Education <input checked="" type="checkbox"/> Industry <input checked="" type="checkbox"/> Other <u>Academic/Industry Research Cluster</u> <input type="checkbox"/> SME
Organization Size (employees)	<input type="checkbox"/> < 10 <input type="checkbox"/> 10-49 <input checked="" type="checkbox"/> 50-99 <input type="checkbox"/> 100-199 <input type="checkbox"/> 200-249 <input type="checkbox"/> >249
Short description of organization	The Solid State Pharmaceutical Cluster (SSPC) is a research collaboration encompassing 5 academic and 10 industrial partners funded by Science Foundation Ireland under the <i>Strategic Research Cluster</i> initiative to the sum of €7 million

	<p>over 5 years. Membership of the cluster includes the following :</p> <ul style="list-style-type: none"> <li>▪ University of Limerick</li> <li>▪ University College Cork</li> <li>▪ National University of Ireland Galway</li> <li>▪ University College Dublin</li> <li>▪ Trinity College Dublin</li> <li>▪ Roche Ireland</li> <li>▪ Wyeth</li> <li>▪ Schering-Plough (Avondale)</li> <li>▪ Pfizer</li> <li>▪ Eli-Lilly</li> <li>▪ GlaxoSmithKline</li> <li>▪ Covidien</li> <li>▪ Helsinn</li> <li>▪ Janssen Pharmaceuticals</li> <li>▪ Merck, Sharp &amp; Dome</li> </ul> <p>The cluster has originated from a need to generate a greater understanding of pharmaceutically relevant crystallisation processes, and integrates the domains of chemistry, pharmaceuticals, pharmaceutical technology, chemical engineering and mechanical engineering. The objective of the SSPC is to rationally design solid state pharmaceutical materials in the required physical and chemical forms to satisfy the requirements of advanced formulation and quality assurance.</p> <p>Considerable consultation with the above academic and industrial partners has focused the cluster's research on fundamental topics that influence the behaviour of pharmaceutical solids. As a result, the research is being organised in a manner whereby interdisciplinary groups will work on fundamental problems in each of the themes identified below, with a view to their eventual impact on industrial practice.</p>
<p>Broad area in which the fellow's project should lie / project idea</p>	<p>The SSPC can offer a number of projects within each of five research themes:</p> <ul style="list-style-type: none"> <li>▪ Molecular level control of the structure of pharmaceutical solids</li> <li>▪ Disordered solids/high energy forms/amorphous domains</li> <li>▪ Methods to characterize the solid state</li> <li>▪ In-situ methods</li> <li>▪ Process scale-up and modeling.</li> </ul>
<p>Key expertise sought</p>	<p>Chemist, Chemical Engineer or Pharmacist with expertise in one or more of the following areas:</p> <ul style="list-style-type: none"> <li>▪ Crystallization of pharmaceutical solids</li> <li>▪ Polymorphism and polymorphic transformations</li> <li>▪ Molecular modeling</li> <li>▪ Preformulation</li> <li>▪ Spray drying</li> <li>▪ Crystallization scale-up and process optimization</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Process Analytical Technology (PAT) –FBRM, In-situ ATR-FTIR, PVM, In-situ RAMAN</li> </ul>
Duration (IEF/IEF 12-24 months, IOF 12-24 months outgoing plus 12 months return)	12-24 months
Project to be <u>submitted</u> for 18-08-09 deadline	<b>Activity: PEOPLE:</b> Marie Curie International Incoming Fellowships (IIF), Intra-European Fellowships for Career Development (IEF), International Outgoing Fellowships for Career Development (IOF)