

# RAÚL PACHECO GÓMEZ

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## EDUCATION

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- Oct 2004 - July 2008**    **Multidisciplinary PhD in Biophysical Chemistry and Biomedical Research**  
**University of Warwick**  
“Structural studies and assembly dynamics of the bacterial cell division protein FtsZ”
- Protein expression and purification
  - Study of protein-protein interaction using a wide range of biophysical techniques, including Circular and Linear Dichroism Spectroscopy, UV/Vis Spectroscopy, Right Angled Light Scattering, Dynamic Light Scattering, Analytical Ultracentrifugation, Calorimetry, Electron Microscopy, X-rays and Small-angle X-ray
  - Use of DNA Recombinant technologies, including site-directed mutagenesis and molecular cloning
- Oct 2003 - Oct 2004**    **MSc in Mathematical Biology and Biophysical Chemistry (Distinction)**  
**University of Warwick**  
Multidisciplinary MSc consisting of two distinct parts:
- Taught section of 8 modules covering from microscopy and imaging, molecular modelling and statistics for data analysis to cellular systems and biomolecules
  - Three research mini-projects in three different research environments: experimental biology, experimental physical sciences and computation/mathematics
- Feb - July 2002**    **Course in Renewable Energy Sources**  
**Seville, Spain**  
“Study of a Hotel Complex supplied exclusively by Renewable Energy”
- 1996 – 2002**    **Licenciado en Ciencias Químicas**  
**Seville, Spain**

## SCIENTIFIC PROFESSIONAL EXPERIENCE

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- Oct 2014 – present**    **Product Technical Specialist, MicroCal, Malvern Panalytical Ltd, Malvern, UK**
- Oct 2013 – Oct 2014**    **Senior Scientist (Phage display/Protein engineering) – Immunocore Limited, Milton Park, Abingdon, Oxon**  
Development and discovery of novel T-cell receptor based drugs to treat cancer and other diseases:
- Cloning, site-directed mutagenesis, protein expression, purification and study of protein-protein interactions using Biacore
  - Construction, panning, screening and analysis of phage display libraries.

- July 2008 - Oct 2013**    **Senior Research Fellow, School of Biosciences, University of Birmingham, UK – Development of world’s first homogeneous assay to detect *E. coli* O157 using a combination of synthetic biology/Linear Dichroism**
- Phage culturing and purification
  - Bioconjugation of small molecules/DNA/proteins/dyes to proteins/antibodies/antibody fragments
  - Plan/development of Linear Dichroism as a novel research tool in clinical diagnostics
  - Development of experimental strategies/SOPs to achieve the aims of the project
- Supervision and training of more than 20 students** including undergraduate students (BSc/MSci), postgraduate students (MRes/MSc/PhD) **and commercial partners** (external contracts with pharmaceutical companies)
- Knowledge Transfer Secondment and Advantage Proof of Concept awards: External Consultant at Fleet Bioprocessing Ltd and Linear Diagnostics Ltd**
- Quality/GMP training
  - Assessment and development of experimental, bioconjugation and optimization strategies used for diagnostic applications
- Experimental design and analysis of pharmaceutical samples for external companies using Circular Dichroism**
- Protein secondary structure deconvolution/Report writing with strict deadlines
- Dec 2003 - July 2008**    **Doctoral Research Assistant, University of Warwick, UK**
- QC, experimental design/analysis of pharmaceutical samples using Circular Dichroism
  - Protein secondary structure deconvolution/Report writing
  - Collaboration in a research project using GC/MS for mushroom fruiting bodies
- June - Sept 2002**    **Research Assistant, Hilaturas y Tejidos Andaluces, Seville, Spain**
- Quality control/quality tests of unfinished and finished fabrics
  - Preparation and analysis of coloured fabrics
- Sept 2001 - Sept 2002**    **Fellow in Analytical Chemistry, University of Seville, Spain**
- Research Project: “Interfacial Studies of stone monument decay using mercury porosimetry”
- June - Sept 1999**    **Research Assistant, Natural Resources and Agrobiology Institute, CSIC IRNA, Spain**
- Preparation and determination/characterisation of Organic Matter using extraction, GC/MS and IR