David Wildridge

Personal Information

Nationality: British
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Research Interests

Having concentrated my research my horizons and seek a new challenge. Throughout my research career I have been fortunate to have gained valuable experience in cellular metabolism and molecular biology, aspects of biology I find particularly interesting, and have a great enthusiasm for. I would like to further develop the skills and knowledge acquired in my recent research career, in addition to learning about alternative approaches in another biological system. I also value the efforts of collaborative projects, and have a keen interest in the integration of biology with computational approaches. The handling of Personal Information Research Interests interest in the integration of biology with computational approaches. The handling of large datasets required me to develop my computation skills and seek novel methods for data mining. Consequently, I believe I have the skills to contribute to both the research and the organisation aspects of a laboratory, in addition to making a positive contribution to the team.

Employment and Education

2013-2015, Jihočeská univerzita v Českých Budějovicích, Czech Republic
Post-doctoral Researcher in the laboratory of Dr Alena Zíková

My research projects focused on the functional characterisation of proteins associated with complex IV of the respiratory chain using RNAi and the re proteins. In addition to this, a significant element of my research was to develop a regulatable system in Leishmania other parasite models.

2006-2012, University of Glasgow, Scotland
The College of Medical, Veterinary, and Life Sciences PhD
Thesis title: Metabolism and drug resistance in trypanosomatids

My PhD project, under the guidance of Prof. Michael Barrett and Dr. Richard Burchmore, involved the investigation of energy metabolism, metabolomics, and drug resistance in Protozoan parasites.

During my PhD I was part of a multidisciplinary collaborative project to develop a work system for metabolomic experiments, from the biological aspects to the downstream data analysis. This was challenging in many respects due to the novel approach of using mass spectrometry to resolve the metabolome of trypanosomatids. Another element of my PhD project was the generation of a transketolase null mutant in Leishmania, using standard and advanced molecular biology techniques, and the subsequent phenotypic analysis. Additionally, I was involved in supervising several project students in the lab, facilitating undergraduate practical classes (most notably in molecular biology), ordering reagents, communicating with sales reps, and contributing to the organisation and upkeep of the lab. I was also postgraduate divisional representative and have been involved in organising divisional social events.

2005-2006, University of Glasgow, Scotland
MRes Biomedical Sciences – Merit

2001-2005, University of Glasgow, Scotland
BSc (Hons) Virology – Lower second class

Practical Techniques

Throughout the research projects I have undertaken I have acquired skills in a range of techniques including gene knockout, RNAi, Southern blot, northern blot, cell culture, in vitro drug assays, proteomics using DiGE, metabolite extractions, metabolomic data analysis, high resolution clear native gels, protein expression, and fluorescent microscopy. I am also computer literate in Microsoft Office having taken several advanced courses, in addition to database design, SQL, VBA, and Vector NTI.

Conferences Attended

April 2014 – BSP, Cambridge – Poster presentation
June 2009 – SysTryp meeting, Bordeaux, France – Oral presentation
May 2009 - 4th Integrative Physiology Conference, Aberdeen - Invited speaker
April 2009 - KMCBM, Woods Hole, MA, USA - Poster presentation
December 2008 - 3rd Kinetoplastid meeting, Liverpool - Oral presentation
April 2008 - Metabomeeting, Lyon, France - Poster presentation
March 2008 – BSP, Newcastle – Poster presentation

Extracurricular

June 2012 – Undergraduate Molecular Method Course Development
June 2007 – Volunteer at Glasgow University Science Festival
September 2007 - BioTech YES competition, Edinburgh

Publications

Verner Z, Basu S, Benz C, Dixit S, Dobáková E, Faktorová D, Hashimi H, Horáková E, Huang Z, Paris Z, Pena P, Ridlon L, Týč J, **Wildridge D**, Zíková A, Lukeš J. (2014). The malleable mitochondrion of Trypanosoma brucei. Int Rev Cell Mol Biol. In press.

Cottret L, **Wildridge D**, Vinson F, Barrett MP, Charles H, Sagot MF, Jourdan F. (2010). MetExplore: a web server to link metabolomic experiments and genome-scale metabolic networks. Nucleic Acid Research. Jul;38(Web Server issue):W132-7.

Veitch N, Johnson P, Trivedi U, Terry S, **Wildridge D**, MacLeod A. (2010). Digital gene expression analysis of two life cycle stages of the human infective parasite, *Trypanosoma brucei gambiense*, reveals differentially expressed polycistronic units. BMC Genomics. Feb 22;11:124.

Jourdan F, Cottret L, Huc H, **Wildridge D**, Scheltema R, Hillenweck A, Barrett MP, Zalko D, Watson DG, Debrauwer L. (2009). Use of reconstituted metabolic networks to assist in metabolomic data visualization and mining. Metabolomics. 2010 Jun;6(2):312-321.

Kamleh A, Barrett MP, **Wildridge D**, Burchmore RJ, Scheltema RA, Watson DG. (2008). Metabolomic profiling using Orbitrap Fourier transform mass spectrometry with hydrophilic interaction chromatography: a method with wide applicability to analysis of biomolecules. Rapid Commun Mass Spectrom. Jun;22(12):1912-8.

Scheltema RA, Kamleh A, **Wildridge D**, Ebikeme C, Watson DG, Barrett MP, Jansen RC, Breitling R. (2008). Increasing the mass accuracy of high-resolution LC-MS data using background ions: a case study on the LTQ-Orbitrap. Proteomics. Nov;8(22):4647-56.

About me

During my holidays I enjoy travelling around Europe, giving me the opportunity to experience and learn about different cultures. In my leisure time I enjoy photography, playing football, sudoku, reading, and I am in the process of starting a travel blog.

References available upon request