Ian Jeffery

i.jeffery@ucc.ie

Ian Jeffery was born in Cork, Ireland in 1980. He received a BSc in Biochemistry from University College Cork and PhD in Bioinformatics from University College Dublin in 2007. From 2007 to 2010 he continued working with Prof. Des Higgins in UCD where his research on predicting the activity of gene regulatory factors in gene expression datasets lead to him participating in scientific collaborations with pharmaceutical company Servier. Now a senior research scientist, he leads the Bioinformatics group that anchors the ELDERMET project and several bioinformatics studies at the Alimentary Pharmabiotic Centre UCC (apc.ucc.ie).

Key Qualifications

Ian Jeffery specializes in Bioinformatics and Biostatistics, providing advice and assistance in statistical aspects of clinical research. He is familiar with both observational and interventional methodology and has been shown to be efficient at covering a wide range of disciplines, while coordinating analysis efforts across multiple ongoing research projects.

He has experience with observational studies, analysing prospective cohort studies with appropriate assessment of confounding factors, interactions, goodness of fit and diagnostic assessment of final models. He has also participated in the development and refinement of diagnostic questionnaires, clinical trial designs, sample size calculations and the analysis and interpretation of data and preparation of clinical reports. He is familiar with meta-analytical regression methods, analysis of genetic data, metabolomics data, and experience in the design and reporting of statistical analysis plans for submission to regulatory authorities.

Qualifications

2003 – 2006	PhD "Application and Evaluation of Data Analysis Methods for Gene Expression Microarrays" supervised by Des Higgins, University College Dublin.
1992 - 2003	II-I, BSc, Biological and Chemical Sciences (Biochemistry), Biochemistry Department, University College Cork, Cork, Ireland

Publications

Original Papers

- Neville BA, Sheridan P, Harris HMB, Coghlan S, Jeffery IB, Forde BM, Martin J, Ross RP, Scott KP, O'Toole PW. Pro-inflammatory flagellin proteins of commensal Eubacterium and Roseburia species are variably represented in the intestinal microbiome of elderly humans. In Preparation.
- Jeffery IB*, Claesson MJ*, Conde S, Power SE, O'Connor EM, Cusack S, Harris H, Coakley M, Lakshminarayanan B, O'Sullivan O, Fitzgerald G, Deane J, O'Connor M, Harnedy N, O'Connor K, O'Mahony D, Van Sinderen D, Wallace M, Brennan L, Stanton C, Marchesi JR, Fitzgerald AP, Shanahan F, Hill C, Ross RP, O'Toole PW. Diet determines gut microbiota in the elderly which correlates with health. Nature 488, 178–184 (2012). *Joint First Authors
- Schellekens H, Clarke G, Jeffery IB, Dinan TG, Cryan JF. Dynamic 5-HT2C receptor editing in a mouse model of obesity. PLoS ONE 7, e32266 (2012).
- Jeffery IB, O'Toole PW, Öhman L, Claesson MJ, Deane J, Quigley EMM, Simrén M. An irritable bowel syndrome subtype defined by species-specific alterations in faecal microbiota. Gut 61, 997–1006 (2012).
- Riboulet-Bisson E, Sturme MHJ, Jeffery IB, O'Donnell MM, Neville BA, Forde BM, Claesson MJ, Harris H, Gardiner GE, Casey PG, Lawlor PG, O'Toole PW, Ross RP. Effect of Lactobacillus salivarius bacteriocin Abp118 on the mouse and pig intestinal microbiota. PLoS ONE 7, e31113 (2012).
- Madden SF, Carpenter SB, Jeffery IB, Björkbacka H, Fitzgerald KA, O'Neill LA, Higgins DG. Detecting microRNA activity from gene expression data. BMC Bioinformatics 2010; 11:257.
- Yin J, McLoughlin S, Jeffery IB, Glaviano A, Kennedy B, Higgins DG. Integrating multiple genome annotation databases improves the interpretation of microarray gene expression data. BMC Genomics 2010; 11:50.
- Jeffery IB, Madden SF, McGettigan PA, Perrière G, Culhane AC, Higgins DG. Integrating transcription factor binding site information with gene expression datasets. Bioinformatics 2007; 23:298–305.
- Jeffery IB, Higgins DG, Culhane AC. Comparison and evaluation of methods for generating differentially expressed gene lists from microarray data. BMC Bioinformatics 2006; 7:359.
- McArdle L, McDermott M, Purcell R, Grehan D, O'Meara A, Breatnach F, Catchpoole D, Culhane AC, Jeffery I, Gallagher WM, Stallings RL. Oligonucleotide microarray analysis of gene expression in neuroblastoma displaying loss of chromosome 11q. Carcinogenesis 2004; 25:1599–1609.

Reviews

- Jeffery, IB., O'Toole, PW. Diet-microbiota interactions and their implications for healthy living.
- Special Issue "Gut Microbiota and Gut Function" – Nutrients. In Preparation

Comments

- Jeffery, IB., Claesson, MJ., O'Toole, PW. & Shanahan, F. Categorization of the gut microbiota: enterotypes or gradients? Nat. Rev. Microbiol. 10, 591–592 (2012).

Addendums

- Jeffery IB, Quigley EMM, Öhman L, Simrén M, O'Toole P.W. The microbiota link to IBS - an emerging story. Gut Microbes. Gut Microbes 3, (2012).

Book Chapters

- Claesson MJ, Jeffery IB, O'Toole PW. Intestinal microbiota and aging. Springer Encyclopedia on Human Metagenomics Submitted
- Jeffery IB, Claesson MJ, O'Toole PW. Alterations of the intestinal microbiota in Irritable Bowel Syndrome.Springer Encyclopedia on Human Metagenomics. Submitted