

## Strain, Sean Professor

Professor of Human Nutrition and Co-Director of Centre for Molecular Biosciences



### Academic and Professional Qualifications

- ▶ 2002: Member, Royal Irish Academy
- ▶ 2002: Reg Nutr., The Nutrition Society
- ▶ 1980: Dip Ed (TAFE), Newcastle, Australia
- ▶ 1976: PhD Nutritional Biochemistry, Queen's University of Belfast
- ▶ 1973: BAgr Agricultural Chemistry, Queen's University of Belfast
- ▶ 1972: BSc Chemistry, Queen's University of Belfast

### Career History

- ▶ 2001 - present: Co-Director, Centre for Molecular Biosciences, University of Ulster
- ▶ 1995 - present: Professor of Human Nutrition, University of Ulster
- ▶ 1984 - 1994: Lecturer, Senior Lecturer, Reader in Human Nutrition, University of Ulster
- ▶ 1977 - 1980: Lecturer, Science, Newcastle College of Advanced Education (NCAE), Australia
- ▶ 1980 - 1981: Senior Lecturer and Acting Head of Department, Home Science/Textiles, (NCAE), Australia
- ▶ 1981 - 1984: Lecturer, School of Life Sciences , Ulster Polytechnic

### Teaching & Learning Activities

Human Nutrition

### [Research Interests and publications](#)

Number of items: **315**.

### Selected publications

Engstrom, Karin, Love, Tanzy M, Watson, Gene E, Zareba, Grazyna, Yeates, Alison J., Wahlberg, Karin, Alhamdow, Ayman, Thurston, Sally W, Mulhern, Maria S., McSorley, Emeir M., Strain, JJ, Davidson, Philip W, Shamlaye, Conrad F, Myers, Gary J, Rand, Matthew D, van Wijngaarden, Edwin and Broberg, Karin (2016) *Polymorphisms in ATP-binding cassette transporters associated with maternal methylmercury disposition and infant neurodevelopment in mother-infant pairs in the Seychelles Child Development Study*. Environment International, 0.

Pourshahidi, Kirsty, Wallace, J. M. W., Mulhern, Maria S., Horigan, Geraldine, Strain, JJ, McSorley, Emeir, Magee, Pamela, Bonham, M. P. and Livingstone, Barbara (2016) *Indices of adiposity as predictors of cardiometabolic risk and inflammation in young adults*. Journal of Human Nutrition and Dietetics, 29 (1). pp. 26-37.

Garg, Ramandeep, Brennan, Lorraine, Price, Ruth, Wallace, Julie, Strain, JJ, Gibney, Mike, Shewry, Peter, Ward, Jane, Garg, Lalit and Welch, RW (2016) *Using NMR-Based Metabolomics to Evaluate Postprandial Urinary Responses Following Consumption of Minimally Processed Wheat Bran or Wheat Aleurone by Men and Women*. Nutrients, 8 (2). pp. 96.

Cronin, Barbara E., Allsopp, Philip, Slevin, Mary M., Magee, P, Livingstone, MBE, Strain, JJ and McSorley, Emeir M (2016) *Effects of supplementation with a calcium-rich marine-derived multi-mineral supplement and short-chain fructo-oligosaccharides on serum lipids in postmenopausal women*. British Journal of Nutrition, 115 (04). pp. 658-665.

Logue, Caomhan, Dowey, L, Strain, JJ, Verhagen, H and Gallagher, A (2016) *The potential application of a biomarker approach for the investigation of low-calorie sweetener exposure*. Proceedings of the Nutrition Society, 75 (02). pp. 216-225.

McAuley, E., McNulty, H., Hughes, CF, Strain, JJ and Ward, M (2016) *Riboflavin status, MTHFR genotype and blood pressure: current evidence and implications for personalised nutrition*. Proceedings of the Nutrition Society. pp. 1-10.

McAuley, E, McNulty, H, Hughes, Catherine, Strain, JJ and Ward, M. (2016) *Riboflavin status, MTHFR genotype and blood pressure: current evidence and implications for personalised nutrition*. Proceedings of the Nutrition Society. pp. 1-10.

O'Reilly, S. L., McGlynn, A. P., McNulty, Helene, Reynolds, J., Wasson, G. R., Molloy, A. M., Strain, JJ, Weir, D. G., Ward, M, McKerr, G., Scott, J. M. and Downes, Stephen (2016) *Folic Acid Supplementation in Postpolypectomy Patients in a Randomized Controlled Trial Increases Tissue Folate Concentrations and Reduces*

*Aberrant DNA Biomarkers in Colonic Tissues Adjacent to the Former Polyp Site.*  
Journal of Nutrition, 146 (5). pp. 933-939.

Molloy, Anne M., Pangilinan, Faith, Mills, James L., Shane, Barry, O'Neill, Mary B., McGaughey, David M., Velkova, Aneliya, Abaan, Hatice Ozel, Ueland, Per M., McNulty, H, Ward, M, Strain, JJ, Cunningham, Conal, Casey, Miriam, Cropp, Cheryl D., Kim, Yoonhee, Bailey-Wilson, Joan E., Wilson, Alexander F. and Brody, Lawrence C. (2016) *A Common Polymorphism in HIBCH Influences Methylmalonic Acid Concentrations in Blood Independently of Cobalamin.* The American Journal of Human Genetics, 98 (5). pp. 869-882.

Crowe, William, Doherty, Leanne, Watson, Gene, Armstrong, David, Ball, Elisabeth, Magee, Pamela, Allsopp, Philip, Bell, Aubrey, Strain, J J and McSorley, Emeir (2015) *Mercury in Hair Is Inversely Related to Disease Associated Damage in Systemic Lupus Erythematosus.* International journal of environmental research and public health, 13 (1). pp. .

Cronin, Barbara E, Allsopp, Philip J, Slevin, Mary M, Magee, Pamela J, Livingstone, M Barbara E, Strain, J J and McSorley, Emeir M (2015) *Effects of supplementation with a calcium-rich marine-derived multi-mineral supplement and short-chain fructo-oligosaccharides on serum lipids in postmenopausal women.* The British journal of nutrition, 115 (4). pp. 658-65.

Carson, E L, Pourshahidi, Kirsty, Hill, T R, Cashman, K D, Strain, JJ, Boreham, C A and Mulhern, Maria S. (2015) *Vitamin D, Muscle Function, and Cardiorespiratory Fitness in Adolescents From the Young Hearts Study.* The Journal of clinical endocrinology and metabolism, 100 (12). pp. 4621-8.

Logue, C, Dowey, LC, Strain, JJ, Verhagen, V and Gallagher, Alison (2015) *Simultaneous determination by liquid chromatography/mass spectrometry of five low calorie intense sweeteners in urine: a potential biomarker approach for assessing intakes.* EFSA Journal: Shaping the Future of Food Safety, Together, 0.

Allsopp, Philip, Crowe, William, Bahar, Bojlul, Harnedy, Pdraig A, Brown, Emma S, Taylor, Sonja S, Smyth, Thomas J, Soler-Vila, Anna, Magee, Pamela J, Gill, Chris I R, Strain, Conall R, Hegan, Vicky, Devaney, Martin, Wallace, Julie M W, Cherry, Paul, FitzGerald, Richard J, Strain, J J, O'Doherty, John V and McSorley, Emeir M (2015) *The effect of consuming Palmaria palmata-enriched bread on inflammatory markers, antioxidant status, lipid profile and thyroid function in a randomised placebo-controlled intervention trial in healthy adults.* European journal of nutrition, Aug. pp. .

Hopkins, S. M., Gibney, M. J., Nugent, A. P., McNulty, H, Molloy, A. M., Scott, J. M., Flynn, A., Strain, JJ, Ward, M, Walton, J. and McNulty, B. A. (2015) *Impact of voluntary fortification and supplement use on dietary intakes and biomarker status of folate and vitamin B-12 in Irish adults*. American Journal of Clinical Nutrition, 0.

Strain, JJ, Hughes, CF, McNulty, H and Ward, M (2015) *Riboflavin lowers blood pressure: a review of a novel gene-nutrient interaction*. Nutrition and Food Sciences Research (Review Article), 2 (2). pp. 3-6.

Strain, JJ, McAfee, Alison, van Wijngaarden, E., Thurston, S. W., Mulhern, M. S., McSorley, E. M., Watson, G. E., Love, T. M., Smith, T. H., Yost, K., Harrington, D., Shamlaye, C. F., Henderson, J., Myers, G. J. and Davidson, P. W. (2015) *Prenatal exposure to methyl mercury from fish consumption and polyunsaturated fatty acids: associations with child development at 20 mo of age in an observational study in the Republic of Seychelles*. American Journal of Clinical Nutrition, 101. pp. 530-537.

STRAIN, JJ, Yeates, Alison, van Wijngaarden, E, Thurston, SW, Mulhern, Maria S., McSorley, E. M., Watson, GE, Love, TM, Smith, TH, Yost, K, Harrington, D and Shamlaye, CF (2015) *Prenatal exposure to methyl mercury from fish consumption and polyunsaturated fatty acids: associations with child development at 20 mo of age in an observational study in the Republic of Seychelles*. American Journal of Clinical Nutrition, 101 (3). pp. 530-537.

McGarel, C, Pentieva, K, Strain, JJ and McNulty, H (2015) *Emerging roles for folate and related B-vitamins in brain health across the lifecycle*. Proceedings of the Nutrition Society, 74 (01). pp. 46.

Keaveney, EM, Price, RK, Hamill, Lesley L., Wallace, Julie M. W., McNulty, H, Ward, M, Strain, JJ, Ueland, Per M., Molloy, Anne M., Piironen, Vieno, von Reding, Walter, Shewry, Peter R., Ward, Jane L. and Welch, Robert W. (2015) *Postprandial plasma betaine and other methyl donor-related responses after consumption of minimally processed wheat bran or wheat aleurone, or wheat aleurone incorporated into bread*. British Journal of Nutrition, 113 (03). pp. 445.

Keaveney, Edel M., Price, Ruth K., Hamill, Lesley L., Wallace, Julie M. W., McNulty, H, Ward, Mary, Strain, JJ, Ueland, Per M., Molloy, Anne M., Piironen, Vieno, von Reding, Walter, Shewry, Peter R., Ward, Jane L. and Welch, RW (2015) *Postprandial plasma betaine and other methyl donor-related responses after consumption of minimally processed wheat bran or wheat aleurone, or wheat aleurone incorporated into bread*. British Journal of Nutrition, 113 (03). pp. 445.

Carson, E.L., Pourshahidi, Kirsty, O'Kane, M.J., Strain, JJ and Mulhern, Maria S.(2015) *Vitamin D status and muscular side-effects in statin users: preliminary findings*

*from a seasonal observation study*. Proceedings of the Nutrition Society, 74 (OCE4). pp. E210.

O'Kane, S.M., Pourshahidi, Kirsty, Farren, K.M., Mulhern, Maria S., Strain, JJ and Yeates, Alison (2015) *Iodine intake is positively associated with iodine knowledge in women of childbearing age*. Proceedings of the Nutrition Society, 74 (OCE5). pp. E335.

O'Kane, S.M., Pourshahidi, Kirsty, Farren, K.M., Mulhern, Maria S., Strain, JJ and Yeates, Alison (2015) *Knowledge and awareness of iodine nutrition among women of childbearing age*. Proceedings of the Nutrition Society, 74 (OCE4). pp. E260.

Crowe, William, Doherty, Leanne, Watson, Gene, Armstrong, David, Ball, Elisabeth, Magee, Pamela, Allsopp, Philip, Bell, Aubrey, Strain, JJ and McSorley, Emeir (2015) *Mercury in Hair Is Inversely Related to Disease Associated Damage in Systemic Lupus Erythematosus*. International Journal of Environmental Research and Public Health, 13 (1). pp. 75.

Carson, E., Pourshahidi, Kirsty, Boreham, C. A., Hill, T. R., Cashman, K. D., Strain, JJ and Mulhern, Maria S. (2015) *The association between vitamin D status, muscle strength, power and cardiorespiratory fitness in adolescents from the Young Hearts Study*. Proceedings of the Nutrition Society, 74 (OCE2). pp. E163.

McCarroll, Kevin, Beirne, Avril, Casey, Miriam, McNulty, Helene, Ward, M, Hoey, Leane, Molloy, Anne, Laird, Eamon, Healy, Martin, Strain, JJ and Cunningham, Conal (2015) *Determinants of 25-hydroxyvitamin D in older Irish adults*. Age and Ageing, 44 (5). pp. 847.

Yeates, Alison, Love, Tanzy M., Engström, Karin, Mulhern, Maria S., McSorley, E. M., Grzesik, Katherine, Alhamdow, Ayman, Wahlberg, Karin, Thurston, Sally W., Davidson, Philip W., van Wijngaarden, Edwin, Watson, Gene E., Shamlaye, Conrad F., Myers, G.J., Strain, JJ and Broberg, Karin (2015) *Genetic variation in FADS genes is associated with maternal long-chain PUFA status but not with cognitive development of infants in a high fish-eating observational study*. Prostaglandins, Leukotrienes and Essential Fatty Acids (PLEFA), 0.

McCarroll, Kevin, Beirne, Avril, Casey, Miriam, McNulty, H, Ward, Mary, Hoey, Leane, Molloy, Anne, Laird, Eamon, Healy, Martin, Strain, JJ and Cunningham, Conal (2015) *Determinants of 25-hydroxyvitamin D in older Irish adults*. Age and Ageing, 44 (5). pp. 847.

Yeates, Alison J., Love, Tanzy M., Engström, Karin, Mulhern, Maria, McSorley, EM, Grzesik, Katherine, Alhamdow, Ayman, Wahlberg, Karin, Thurston, Sally W., Davidson,

Philip W., van Wijngaarden, Edwin, Watson, Gene E., Shamlaye, Conrad F., Myers, G.J., Strain, JJ and Broberg, Karin (2015) *Genetic variation in FADS genes is associated with maternal long-chain PUFA status but not with cognitive development of infants in a high fish-eating observational study*. Prostaglandins, Leukotrienes and Essential Fatty Acids (PLEFA), 102-10. pp. 13-20.

McCarroll, Kevin, Beirne, Avril, Casey, Miriam, McNulty, H, Ward, M., Hoey, L., Molloy, Anne, Laird, Eamon, Healy, Martin, Strain, JJ and Cunningham, Conal (2015) *Determinants of 25-hydroxyvitamin D in older Irish adults*. Age and Ageing, 44 (5). pp. 847-853.

Slevin, Mary, Allsopp, Philip, Magee, Pamela, Bonham, Maxine, Naughton, Violetta, Strain, JJ, Duffy, Maresa E, Wallace, Julie and McSorley, E. M. (2014) *Supplementation with calcium and short-chain fructo-oligosaccharides affects markers of bone turnover but not bone mineral density in postmenopausal women..* Journal of Nutrition, 144 (3). pp. 297-304.

Duffy, Maresa, Hoey, L, Hughes, Catherine, Strain, JJ, Rankin, A., Souverein, O. W., Dullemeijer, C., Collings, R., Hooper, L. and McNulty, H (2014) *Biomarker responses to folic acid intervention in healthy adults: a meta-analysis of randomized controlled trials*. American Journal of Clinical Nutrition, 99 (1). pp. 96.

Clarke, M., Ward, M, Strain, JJ, Hoey, Leane, Dickey, W. and McNulty, H (2014) *B-vitamins and bone in health and disease: the current evidence*. Proceedings of the Nutrition Society. pp. 1.

Weir, Ruth R, Carson, Emma L, Mulhern, Maria S., Strain, JJ, Laird, Eamon, Healy, Martin and Pourshahidi, L. Kirsty (2014) *Validation of a vitamin D food frequency questionnaire using the method of triads*. Nutrients, 6 (7). pp. 2871-2872.

Weir, R. R., Johnston, M., Lowis, C., Fearon, A. M., Beattie, J. A. M., Strain, JJ and Pourshahidi, Kirsty (2014) *Efficacy of fortification of cow's milk as a dietary strategy to increase dietary vitamin D intakes*. Proceedings of the Nutrition Society, 73 (OCE2). pp. E69.

McNulty, H, Strain, JJ and Ward, M (2014) *Riboflavin lowers blood pressure in hypertensive people with the MTHFR 677TT genotype*. Archives of Public Health, 72 (Suppl ). pp. K2.

Strain, JJ (2014) *Eating fish for two*. Nutrition Bulletin, 39 (2). pp. 181.

Reilly, R., McNulty, H, Pentieva, K., Strain, JJ and Ward, M (2014) *MTHFR 677TT genotype and disease risk: is there a modulating role for B-vitamins?*. Proceedings of the Nutrition Society, 73 (01). pp. 47.

Myers, Gary J, Davidson, Philip W, Watson, Gene E, van Wijngaarden, Edwin, Thurston, Sally W, Strain, JJ, Shamlaye, Conrad F and Bovet, Pascal (2014) *Methylmercury exposure and developmental neurotoxicity*. Bulletin of the World Health Organization, 93 (2). pp. 132A.

Price, Ruth K., Wallace, Julie M. W., Hamill, Lesley L., Keaveney, Edel M., Strain, JJ, Parker, Michael J. and Welch, RW (2014) *Evaluation of the effect of wheat aleurone-rich foods on markers of antioxidant status, inflammation and endothelial function in apparently healthy men and women – CORRIGENDUM*. British Journal of Nutrition, 111 (04). pp. 756.

Carson, E. L., Pourshahidi, Kirsty, Baldrick, Francina R., Kelly, M., Madigan, S. M., Strain, JJ and Mulhern, Maria S. (2014) *Vitamin D status in COPD patients: a preliminary seasonal observation study*. Proceedings of the Nutrition Society, 73 (OCE2). pp. E82.

van Wijngaarden, Edwin, Harrington, Donald, Kobrosly, Roni, Thurston, Sally W., O'Hara, Todd, McSorley, Emeir, Myers, Gary J., Watson, Gene E., Shamlaye, Conrad F., Strain, JJ and Davidson, Philip W. (2014) *Prenatal exposure to methylmercury and LCPUFA in relation to birth weight*. Annals of Epidemiology, 24 (4). pp. 273.

Laird, E, McNulty, H, Ward, M, Hoey, L, McSorley, EM, Wallace, JMW, Carson, E, Molloy, AM, Healy, M, Casey, MC, Cunningham, C and Strain, JJ (2014) *Vitamin D Deficiency Is Associated With Inflammation in Older Irish Adults*. The Journal of Clinical Endocrinology & Metabolism, 99 (5). pp. 1807.

Watson, G.E., van Wijngaarden, E, Love, T.M.T., McSorley, E. M., Bonham, M. P., Mulhern, Maria, Yeates, Alison, Davidson, P.W., Shamlaye, C.F., STRAIN, JJ, Thurston, S.W., Harrington, D, Zareba, G, Wallace, Julie MW and Myers, G.J. (2013) *Neurodevelopmental outcomes at 5 years in children exposed prenatally to maternal dental amalgam: The Seychelles Child Development Nutrition Study*. Neurotoxicology and Teratology, 39. pp. 57-62.

van Wijngaarden, E, Thurston, S.W., Myers, G.J., STRAIN, JJ, Weiss, B, Zarccone, T, Watson, G.E., Zareba, C.F., McSorley, E. M., Mulhern, Maria S., Yeates, Alison J., Henderson, J, Gedeon, J, Shamlaye, C.F. and Davidson, P.W. (2013) *Prenatal methylmercury exposure in relation to neurodevelopment and behavior at 19 years of age in the Seychelles Child Development Study*. Neurotoxicology and Teratology, 39. pp. 19-25.

Wilson, CP, McNulty, H, Ward, M, Strain, JJ, Trouton, TG, Hoeft, B, Weber, P, Roos, FF, Horigan, G, McAnena, Liadhan and Scott, JM (2013) *Blood pressure in treated hypertensive individuals with the MTHFR 677TT genotype is responsive to intervention with riboflavin: findings of a targeted randomized trial*. Hypertension, 61. pp. In Press.

Yeates, Alison J., Mulhern, Maria S., Ueland, Per M., McSorley, E. M., Wallace, Julie M. W., Watson, Gene E., Myers, Gary E., Van Wijngaarden, E., Shamlaye, C., Davidson, P.W. and STRAIN, JJ (2013) *Fish consumption and polyunsaturated fatty acid status of pregnant women in the Seychelles Child Development and Nutrition Study Cohort 2*. In: Scottish Section Nutrition Society Meeting: Polyunsaturated fatty acid mediators: implications for human health, Edinburgh. Cambridge Journals. Vol 72 (OC (E107)

McGlynn, Angela P, Wasson, Gillian R, O'Reilly, Sharleen R, McNulty, Helene, Downes, C. Stephen, Chang, Chin-Kuo, Hoey, Leane, Molloy, Anne M, Ward, Mary, Strain, JJ, McKerr, George, Weir, Donald G and Scott, John M (2013) *Low Colonocyte Folate Is Associated with Uracil Misincorporation and Global DNA Hypomethylation in Human Colorectum*. Journal of Nutrition, 143.

Mulhern, Maria S., McSorley, E. M., Wallace, J. M. W, Myers, G. J, Davidson, P. W, Thurston, S. W., Shamlaye, C. F., Henderson, J., Watson, G. E., van Wijngaarden, E. and Strain, JJ (2013) *Maternal long chain polyunsaturated fatty acid status is associated with child growth*. Proceedings of The Nutrition Society, 72. pp. OCE2.

Strain, JJ, Duffy, Emeir M., van Wijngaarden, E, Kobrosly, RW, Bonham, M. P, Mulhern, Maria S., McAfee, Alison, Davidson, PW, Shamlaye, CF, Henderson, J, Watson, GE, Thurston, SW, Wallace, JMW, Ueland, PM and Myers, GJ (2013) *Choline status and neurodevelopmental outcomes at 5 years of age in the Seychelles Child Development Nutrition Study*. British Journal of Nutrition, 9. pp. 1-7.

Hoey, Leane, McNulty, H., Duffy, ME, Hughes, Catherine and STRAIN, JJ (2013) *EURRECA - Estimating folate requirements for deriving dietary reference values*. Critical Reviews in Food Science and Nutrition, 53. pp. 1-10.

Simpson, EEA, Hodkinson, Claire F., Maylor, Elizabeth A., McCormack, Jacqueline M., Rae, Gordon, Strain, JJ, Alexander, H. Denis and Wallace, Julie M.W. (2013) *Intracellular cytokine production and cognition in healthy older adults*. Psychoneuroendocrinology.

Nkhoma, O. W. W., Duffy, Maresa E, Cory-Slechta, D. A., Davidson, P. W., Duffy, E. M., Strain, JJ and O'Brien, G. M. (2013) *Early-Stage Primary School Children Attending a School in the Malawian School Feeding Program (SFP) Have Better Reversal Learning and Lean Muscle Mass Growth Than Those Attending a Non-SFP School*. Journal of Nutrition, 143 (8). pp. 1324.



Duffy, Maresa, Hoey, Leane, Hughes, Catherine, Strain, JJ, Rankin, Audrey, Souverein, Olga W, Collings, Rachel, Hooper, Lee, McNulty, Helene and Dullemeijer, Carla (2013) *Biomarker responses to folic acid intervention in healthy adults: a meta-analysis of randomized controlled trials*. The American Journal of Clinical Nutrition, TBC. pp. 1.