

Nutrition Society Congress 2024

2-5 July 2024 - Belfast, Northern Ireland, UK

CONGRESS PROGRAMME

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Dear Delegate,

On behalf of the Irish Section of The Nutrition Society, we are delighted to welcome you to Belfast for the inaugural Nutrition Society Congress. Unique to this new congress format (previously the Summer Conference) is that you will have the opportunity to engage with more nutrition science. In addition to the Society's core content, within the programme you will have the chance to hear the latest research from the Society's partner organisations, universities, the private sector and more, on a diverse range of research. The Congress brings together an international audience from a diverse range of disciplines within the nutrition field, including academics, students, healthcare professionals, industry, freelancers, and policy leaders, so the opportunities for networking are also widespread.

Within the congress format, the core programme is this year being delivered by the Irish Section, supported by the Science Committee. The overall theme of the Congress is 'New data-focused approaches and challenges'. The discipline of nutrition science is diverse in nature – encompassing the study of human health from a molecular to a public health level, and from looking at ingredients or nutrients to considering a (sustainable) global food system. Recognising this diversity, the data used to underpin and inform nutrition science are complex, stemming from a variety of sources. The aim of this Congress is to provide an overview of the diversity of the data collected and used within the field of nutrition science and how analysis of these data has and can be used to progress the discipline.

By the end of the Congress, with plenary speakers and through symposia, attendees will have learned about the application of data science to nutritional epidemiology, novel study designs and data collection methods, use of food intake and purchase data, consideration of food system and policy aspects, and the future of large datasets and new methods to create and analyse them in nutrition. The Julie Wallace Award, Silver Medal, Rank Prize and *British Journal of Nutrition* Paper of the Year will also be presented, whilst four of our UK Postgraduate Competition winners will give their presentations, with a further four winners in attendance who have already presented at the Irish Section Postgraduate Conference in Athlone in February 2024. Theme Leaders have selected their abstract highlights, and some of our Special Interest Groups have developed their own symposia. During the Congress we are also launching a new textbook in the Nutrition Society series, *Animal Nutrition*, edited by Brameld et al. and published by Wiley-Blackwell. As ever within Society conferences, original communications are an important part of the programme, and students have an opportunity to participate in the Student Competition. The busy schedule also includes the Nutrition Society's Annual Charity Meeting and Irish Annual Section Meeting.

As many of you will be aware, the former Nutrition Society President and Irish Section founding member, Professor Mike Gibney, died following a short illness in February 2024. Mike was a close friend and colleague of many in the audience and was an integral member of the Irish Section of the Nutrition Society. Mike is much missed, and our thoughts are with his family, friends and colleagues. You will find a tribute to Mike in the Nutrition Society Gazette, available at the Congress. We would like to thank the Irish Section members who have given so generously of their time to help develop the programme, and all those who have helped to review abstracts and chair sessions.

We hope you will find this new format and the science within it stimulating, whilst also allowing you to take the time to meet up with colleagues and friends, and perhaps explore the lively city of Belfast.

If you use X, please follow the conference at @NutritionSoc and continue the discussion using the hashtag #NSCongress24. We look forward to welcoming you to #NSCongress24.

Yours sincerely,

Dr Anne Nugent and Professor Jayne Woodside Queen's University Belfast (on behalf of the Irish Section local organising committee)

Please note: This Congress is being observed, and some sessions may be recorded by, researchers at Queen's University Belfast for the purposes of investigating and improving inclusivity and audience participation.

PROGRAMME DAY ONE

TUESDAY 2 JULY

10:15	Registration
	Exhibition Area
11:00	Opening Ceremony
	Assembly Hall
	Professor Mary Ward, President of The Nutrition Society, Ulster University, UK
	Professor Ian Young, Queen's University Belfast, UK and Chair, Scientific
	Advisory Committee on Nutrition, UK
	Professor Jayne Woodside, Queen's University Belfast, UK
	Dr Anne Nugent, Queen's University Belfast, UK
	Plenary Lecture One
	Hosted by: The Nutrition Society
	Assembly Hall
11:05	Global food transformation and SDGs by 2030: challenges for prevention policy and
	systems change
	Dr Tarra Penney, York University, Canada
	Core Symposium One: Nutrition data in epidemiology
	Hosted by: The Nutrition Society
	Assembly Hall
12:00	Data challenges in nutritional epidemiology – intake, patterns or biomarkers – or
	else?
	Professor Edith Feskens, Wageningen University, The Netherlands
12.20	Pig data in putritional anidomialogy
12:50	Big data in nutritional epidemiology Professor Tilman Kübn University of Vienna, Austria
	Tolessor minian Runn, Oniversity of Vienna, Austria
13:00	Biomarkers of nutritional exposure and status
	Professor Lorraine Brennan, University College Dublin, Ireland
13:30	Lunch
	Exhibition Area
13:30	Satellite networking session: Mix 'n' mingle
	Hosted by: NutriPD
	Board Room
	Dr Lisa Ryan, Atlantic Technological University, Ireland
	Sarah O'Donovan, Atlantic Technological University, Ireland

14:30	Original Commu	inication Session One
	Room locations are note	d on the session running order
15:30	Refres	hment Break
	Exhil	bition Area
16:00	Original Commu	inication Session Two
	Room locations are note	d on the session running order
17-20	Thoma Linklights	Satallita Suman agium
17:50	Heated by The Nutrition Society	Satellite Symposium
	Assembly Hall	The Nutrition Society
		Conference Boom
	Nutrition in the Treatment	Comerence noom
	Management and Prevention of	Introduction
	Disease	Dr. Bachel Gibson, King's College London
	Higher frequency of fruit and	Li Hucher Gibson, King's Conege London,
	vegetable consumption is associated	
	with greater daily stool weight in	Shift-diabetes: Working the night shift and
	adults with constipation. S. Steenson ¹ .	living with type 2 diabetes
	D Farsi ¹ . Z. Katsirma ¹ . D. So ¹ . O. Bolton ¹ .	Dr Rachel Gibson, Kina's College London.
	V. Rucco ¹ . A. Adami ¹ . P. Gibson ¹ . A.M.	UK
	Rodriguez-Mateos ¹ , E. Dimidi ¹ , K.	
	Whelan ¹ 1. Department of Nutritional	Developing a nutrition policy for sensory
	Sciences, King's College London, UK.	panels: the why, how, and what
		Dr Louise Durrant, Marlow Foods Ltd, UK
	Food Systems	
	LIFE Climate Smart Chefs; An	The effectiveness of workplace dietary
	Analysis of the Impact of Recipe	interventions on organisational and
	Reformulation on Environment and	business-related outcomes: a systematic
	Nutrition to Support Sustainable	review
	Menu Design (Editions 4 to 6). L.	Georgia Rogerson, King's College London,
	Geaney ^{1,2} , H.Stack ¹ , A. Magnani ³ , M.	UK
	Antonelli ³ , S. Castaldi ^{3,4} , D. O'Kelly ² , F.	Den el Discussion
	Douglas ² , K. O Brien ² , L. B. Kirwan ² I.	Panel Discussion
	Nunster lechnological University,	
	Bishopsiown, Cork, 112 P928 and 2.	
	Main Street Swords Dublin K67 EV89	
	3 Barilla Equadation via Madra Tarasa	
	di Calcutta 3/a Parma Italy 4	
	Università Deali Studi Della Campania	
	"Luiai Vanvitelli" DISTARIE via Vivaldi	
	43. 81100. Caserta Italy	

	Nutrition and Optimum Life Course	
	The influence of fish consumption on	
	the omega 3 index in low fish	
	consuming women of childbearing	
	age: findings from the iFISH study.	
	James E. McMullan ¹ , Marie C.	
	Conway ¹ , Alison J. Yeates ¹ , Philip J.	
	Allsopp ¹ , Maria S. Mulhern ¹ , Edwin van	
	Wijngaarden ² , J.J. Strain ¹ , Emeir M.	
	McSorley ¹ 1. Nutrition Innovation	
	Centre for Food and Health (NICHE),	
	Ulster University, Coleraine BT52 1SA,	
	Ireland and 2. School of Medicine and	
	Dentistry, University of Rochester,	
	Rochester, USA.	
	Novel Nutrition Research	
	Methodologies and Technologies	
	Identifying foods within the UK diet	
	that are rich sources of the	
	micronutrient Queuosine (Q).	
	S.Chandrasekaran ¹ , Dr X.Pan ¹ , Dr G.	
	Rosas da Silva ¹ , Dr C.Neville ² , Prof	
	J.Woodside ² , and Prof B.D Green ¹ , 1.	
	Institute for Global Food Security,	
	School of Biological Sciences, Queen's	
	University Belfast, UK and 2. Centre for	
	Public Health, Queen's University	
	Belfast, UK.	
19.20	Close of Day	
10:30	Close of Day	
19:00	Drinks Reception	
	Europa Hotel	
	The reception is open to all delegates as par	t of the registration fee.

Oral Session One Room: Assembly Hall Time: 14:30 – 15:30

14:30 **OC01** Periconception folic acid supplement use in Northern Ireland: A longitudinal analysis of maternity healthcare data 2015-2020. E.H. Cassinelli¹, M.C. McKinley¹, L. Kent¹, K.-A. Eastwood^{1,2}, D.A. J. M. Schoenaker^{3, 4, 5} and L. McGowan¹ 1. Centre for Public Health, School of Medicine, Dentistry and Biomedical Sciences, Queen's University Belfast, Belfast (United Kingdom) and 2. University Hospitals Bristol NHS Foundation Trust, Bristol (United Kingdom) and 3. School of Human Development and Health, Faculty of Medicine, University of Southampton, Southampton (United Kingdom) and 4. MRC Lifecourse Epidemiology Centre, University of Southampton, Southampton (United Kingdom) and 5. NIHR Southampton Biomedical Research Centre, University of Southampton and University Hospital Southampton NHS Foundation Trust, Southampton (United Kingdom). **Student Competition**

- 14:45 OC02 Can dietetic-led nutrition education sessions lead to a change in midwifery practice? G Stone¹, M Charnley² and J Abayomi¹ 1. Faculty of Health, Social Care & Medicine, Edge Hill University, Ormskirk, Lancashire L39 4QP and 2. School of Health & Sport Sciences, Liverpool Hope University, Liverpool, Merseyside, L16 9JD.
- 15:00 OC03 Women's experience of body weight management during and postpregnancy: a mixed methods approach. R. Nolan¹, A.M. Gallagher¹, A.J. Hill¹ 1. Nutrition Innovation Centre for Food and Health, School of Biomedical Sciences, Ulster University, Coleraine, Northern Ireland. Student Competition
- 15:15 OC04 Vitamin D intakes and food sources in breastfeeding women in Ireland: findings from the WellFed study. M. Ali¹, B. Murphy¹, F. O'Dwyer¹, M. Sanecka¹, S. O'Reilly¹ and A. O'Sullivan¹ 1. UCD Institute of Food & Health, University College Dublin, Belfield, Dublin 4, Ireland. Student Competition

Oral Session Two Room: Minor Hall Time: 14:30 – 15:30

14:30 OC05 Outcomes of children's cooking programs: a systematic review of intervention studies. Joyce Haddad, PhD, APD¹, Klazine van der Horst, MPH, PhD¹, Loan Catalano, BSc¹, Leslie Cunningham-Sabo, PhD, RDN² 1. Bern University of Applied Sciences; School of Health Professions, Nutrition & Dietetics, Murtenstrasse 10, 3008 Bern, Switzerland and 2. Department of Food Science and Human Nutrition, Colorado State University, Fort Collins, CO.

14:45 OC06 UK secondary school pupils' perspectives of interventions to encourage healthier food and drink choices in the school environment. A. Roberts¹, L. McSweeney¹, E. Evans², F. Hillier-Brown¹ and S. Spence¹ 1. Human Nutrition and Exercise Research Centre, Population Health Sciences Institute, Faculty of Medical Sciences, Newcastle University, Newcastle Upon Tyne, UK and 2. Department of Psychology, Durham University, Durham, UK. Student Competition

15:00 OC07 The Food-NEWS Project: How children and adolescents experience nutrition education and food messaging in today's food environment. A. Moorhead¹, F. Quigley¹, R. Price², L. Hollywood³, A.M. Gallagher⁴, E. Mooney⁵ and A. McCloat⁵ 1. School of Communication & Media, Institute for Nursing and Health Research, Ulster University, Belfast, Northern Ireland and 2. School of Biomedical Sciences, Northern Ireland Centre for Food and Innovation (NICHE), Ulster University, Coleraine, Northern Ireland and 3. Ulster Business School, Ulster University, Belfast, Northern Ireland and 4. School of Biomedical Sciences, Northern Ireland Centre for Food and Innovation (NICHE), Ulster University, Coleraine, Northern Ireland and 5. National Centre of Excellence for Home Economics, School of Home Economics, Atlantic Technological University, Angelas College, Sligo, Ireland.

15:15 OC08 Using school food purchase data as a method to assess food group and nutrient intakes in secondary school-aged pupils. J. Bradley¹ and S. Spence¹ 1. Human Nutrition and Exercise Research Centre, Population Health Sciences Institute, Faculty of Medical Sciences, Newcastle University, UK.

Oral Session Three Room: Conference Room Time: 14:30 – 15:30

14:30 OC09 A photovoice study exploring perceptions of healthy eating, nutrition and healthy ageing in older Black African adults in the United Kingdom. S.D. Amenyah¹, H. Osei-Kwasi², J. Adjei¹, L. Bradley¹, L-A Fenge¹, and J.L. Murphy¹. 1. Faculty of Health and Social Sciences, Bournemouth University, Bournemouth, UK and 2. School of Sports, Exercise and Health Science, Loughborough University, UK.

14:45 **OC10** Identifying the relation between food groups and biological ageing; a data-driven approach. Ynte Biemans¹, Daimy Bach¹, Pariya Behrouzi², Steve Horvath^{3,4,5}, Charlotte Kramer¹, Simin Liu⁶, JoAnn Manson⁷, Aladdin H. Shadyab⁸, James Stewart⁹, Eric Whitsel⁹, ¹⁰, Bo Yang¹¹, Lisette de Groot¹ and Pol Grootswagers¹ 1. Division of Human Nutrition and Health, Wageningen University and Research, Wageningen, Netherlands and 2. Biometris, Mathematical and Statistical Methods, Wageningen University and Research, Wageningen, Netherlands and 3. Department of Human Genetics, David Geffen School of Medicine, University of California, Los Angeles, USA and 4. Altos Labs, San Diego Institute of Science, San Diego, CA, USA and 5. Department of Biostatistics, Fielding School of Public Health, University of California, Los Angeles, USA and 6. Department of Epidemiology and Center for Global Cardiometabolic Health, School of Public Health; Departments of Medicine and Surgery, Alpert School of Medicine, Brown University and 7. Department of Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA and 8. Herbert Wertheim School of Public Health and Human Longevity Science, University of California, San Diego, La Jolla, CA, USA and 9. Department of Epidemiology, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA and 10. Department of Medicine, School of Medicine, University of North Carolina, Chapel Hill, NC, USA 11. Department of Epidemiology, Brown University.

15:00 OC11 Dietary patterns in ethnic minority groups: data analysis of vegetable intake from 'Understanding Society' (the UK Household Longitudinal Study). M. Demashkieh¹, R. Hardy¹, P. Shah², B. Ellahi³, S. Amenyah², H. Osei-Kwasi¹, L-A Fenge², R. Vijayakumaran², J.L. Murphy² 1. School of Sports, Exercise and Health Science, Loughborough University, UK and 2. Faculty of Health and Social Sciences, Bournemouth University, Bournemouth Gateway Building, Bournemouth, UK and 3. Faculty of Health, Medicine and Society, University of Chester, UK.

15:15 OC12 Characterising users of community-based interventions designed to improve the food practices of low-income populations. O. Petre¹, J. Allan², L. Craig¹, F. Douglas³, J. Kyle¹, A. Stephen¹ and F. Thies¹ 1. University of Aberdeen, Aberdeen, UK and 2. University of Stirling, Stirling, UK 3. Robert Gordon University, Aberdeen, UK.

Poster Session One Room: Board Room Time: 14:30 – 15:30

14:30 **OC13** Efficacy of a PROtein enriched MEDiterranean diet with or without Exercise on Nutritional status and Diet Quality in Older Adults at Risk of Undernutrition with Subjective Memory Decline enrolled in the PROMED-**EX Trial**. NA.Ward¹, L.Brennan², LCPGM.de Groot³, F.Prinelli⁴, D.Volkert⁵, JV.Woodside¹ and CT.McEvoy^{1,6}. 1. Centre for Public Health, Queen's University Belfast, Belfast. Northern Ireland. UK and 2. School of Agriculture and Food Science, Institute of Food and Health and Conway Institute, University College Dublin, Dublin. Ireland and 3. Division of Human Nutrition, Wageningen University, Wageningen. Netherlands and 4. Epidemiology Unit, Institute of Biomedical Technologies, National Research Council (CNR), Segrate (MI). Italy and 5. Institute for Biomedicine of Aging, Friedrich-Alexander-Universität Erlangen-Nürnberg, Nuremberg. Germany and 6. The Global Brain Institute, Trinity College Dublin, Ireland & University of California San Francisco, USA. **Student Competition**

14:37 OC14 Understanding the barriers and facilitators towards dietary change for dementia risk reduction among British South Asians. O. Cuthbert¹, R. Townsend^{1,2}, R. Stocker¹, S. Mills^{2,3}, C. McEvoy⁴, and A. Fairley^{1,2} 1. School of Biomedical, Nutritional & Sport Sciences, Newcastle University, Newcastle upon Tyne, UK and 2. Human Nutrition & Exercise Research Centre, Centre for Healthier Lives, Population Health Sciences Institute, Newcastle University, Newcastle Upon Tyne, UK and 3. Population Health Sciences Institute, Faculty of Medical Sciences, Newcastle University, Newcastle upon Tyne, UK and 4. Centre for Public Health, Institute for Global Food Security. Institute of Clinical Sciences A, Grosvenor Road, Belfast, UK.

14:44 OC15 Adherence to healthy dietary scores and risk of dementia: findings from the UK Biobank prospective study. F. Carrasco-Marín^{1,2}, C. Araya-Bastias¹, J. Mathers³, K. Livingstone⁴, C. Celis-Morales¹ 1. School of Cardiovascular and Metabolic Health, University of Glasgow. Glasgow, UK and 2. Healthy Life Centre, Universidad de Concepción, Concepción, Chile and 3. Human Nutrition & Exercise Research Centre, Centre for Healthier Lives, Population Health Sciences Institute, Newcastle University, UK and 4. Institute for Physical Activity and Nutrition, School of Exercise and Nutrition Sciences, Deakin University, Geelong, Victoria, Australia.
 Student Competition

14:51	OC16	POWER Study: Functional characteristics and dietary intake of adults aged 70+ at risk of sarcopenia with supportive home care. C. Fallon ¹ , I. Malinauskaite ¹ , C. Cunningham ¹ , K. Horner ¹ , C. A. Corish ¹ 1. School of Public Health, Physiotherapy and Sports Science, University College Dublin, Dublin 4, Republic of Ireland. Student Competition
14:58	OC17	 Hericium erinaceus: A possible future therapeutic treatment for the prevention and delayed progression of Alzheimer's disease? – A Systematic Review. N. Cornford¹, S. Liu¹, M. Charnley¹ 1. School of Health and Sport Sciences, Liverpool Hope University, Hope Park, Liverpool, L16 9JD. Student Competition
15:05	OC18	The effect of sociodemographic factors on energy intake by time of day in the Italian over-50 population: a multilevel approach. B. Pongiglione ¹ , E. Campese ² and L. Palla ² 1. Centre for Research in Health and Social Care Management (CeRGAS), Boccconi University, Milan, Italy and 2. Department of Public Health and Infectious Diseases, University of Rome La Sapienza, Italy
15:12	OC19	Impacts of fortified foods and supplement use on B-vitamin status in older adults: findings from the TUDA study. M. Clements ¹ , M. Ward ¹ , C.F. Hughes ¹ , L. Hoey ¹ , J.J. Strain ¹ , A.M. Molloy ² and H. McNulty ¹ 1. Nutrition Innovation Centre for Food and Health (NICHE), Ulster University, Coleraine, Northern Ireland, United Kingdom and 2. School of Medicine, Trinity College Dublin, Dublin, Ireland.
15:19	OC20	The associations of n-3 fatty acid intake with handgrip strength and muscle mass indices in older adults: a cross-sectional study from UK Biobank. A. Alsowail ¹² , C. Celis-Morales ¹ , M. Guerrero-Wyss ¹ , F. Ho ³ and S. Gray ¹¹ . School of Cardiovascular and Metabolic Health, University of Glasgow, Glasgow G12 8TA, UK and 2. Physical Therapy Department, Faculty of Medical Rehabilitation Sciences, Taibah University, Madinah, Saudi Arabia and 3. School of Health and Wellbeing, University of Glasgow, Glasgow, UK. Student Competition

Poster Session Two Room: Meeting Room One Time: 14:30 – 15:30

14:30 OC21 Effect of specific nutrients or dietary patterns on mental health outcomes in adults; A systematic review and meta-analyses of nutrition interventions. L. Montgomery¹, H. McNulty¹, M. Ward¹, L. Hoey¹, C. Patterson², C. F. Hughes¹ 1. Nutrition Innovation Centre for Food and Health, Ulster University, Northern Ireland and 2. Centre for Public Health, Queen's University Belfast, Northern Ireland. Student Competition

14:37 **OC22** Longitudinal trajectories of plasma polyunsaturated fatty acids and associations with psychosis-spectrum outcomes in early adulthood. David Mongan^{1,2}, PhD; Benjamin I. Perry^{3,4}, PhD; Colm Healy², PhD; Subash Raj Susai², PhD; Stan Zammit^{5,6}, PhD; Mary Cannon^{2,7}, PhD; and David R. Cotter^{2,7}, PhD. *Joint first authors 1. Centre for Public Health, Queen's University Belfast, Northern Ireland and 2. Department of Psychiatry, Royal College of Surgeons in Ireland University of Medicine and Health Sciences, Dublin, Ireland and 3. Department of Psychiatry, University of Cambridge School of Clinical Medicine, Cambridge, United Kingdom and 4. Cambridgeshire and Peterborough NHS Foundation Trust, Cambridge, United Kingdom and 5. Centre for Academic Mental Health, Population Health Sciences, Bristol Medical School, University of Bristol, Bristol, United Kingdom and 6. Division of Psychological Medicine and Clinical Neurosciences, MRC Centre for Neuropsychiatric Genetics and Genomics, Cardiff University, Cardiff, United Kingdom and 7. Future Neuro SFI Research Centre, Royal College of Surgeons in Ireland University of Medicine and Health Sciences, Dublin, Ireland.

14:44 OC23 Effects of cranberry (poly)phenols on mental health in university students: the CRANMOOD randomized controlled trial. N. N. Z. Kamarunzaman¹, M. Le Sayec¹, Y. Li¹, H. Wu¹, R. Mesnage¹, K. Dalrymple¹, J. Halket¹, A. Caldwell¹, A. Borsini², C. Pariante², D. Vauzour³, G. Le Gall³, B. Bajka¹, and A. Rodriguez-Mateos¹ 1. Department of Nutritional Sciences, King's College London, UK and 2. Institute of Psychiatry, Psychology & Neuroscience, King's College London, UK and 3. Norwich Medical School, Biomedical Research Centre, University of East Anglia, UK.
 Student Competition

- 14:51 OC24 The effects of a short-term Mediterranean diet intervention on mood and mental wellbeing in adults. F. Tsofliou¹, G. Pegram¹, P. Fairbairn¹ and E. Brenner¹ 1. Department of Rehabilitation and Sport Sciences, Faculty of Health and Social Sciences, Bournemouth University, Bournemouth, BH8 8GP UK.
- 14:58 OC25 The effect of healthy dietary patterns on stress, mood, and mental health outcomes: A systematic review. James Brooks¹, Paul Fairbairn¹, Anna Mantzouratou¹, Leigh Chester¹, Fotini Tsofliou¹. 1. Bournemouth University, Bournemouth Gateway Building, St Paul's Lane, Bournemouth, Dorset, BH8 8GP.
 Student Competition
- 15:05 OC26 The effects of tea (Camellia sinensis) or its bioactive compounds Ltheanine or L-theanine plus caffeine on cognition, sleep, and mood in healthy participants: a systematic review and meta-analysis of randomised controlled trials. Edward R. Payne¹, Magaly Aceves-Martins¹, Joy Dubost², Arno Greyling³ and Baukje de Roos¹ 1. The Rowett Institute, University of Aberdeen, Aberdeen, UK and 2. Lipton Teas and Infusions, Amsterdam, The Netherlands and 3. Unilever Foods Innovation Centre, Wageningen, The Netherlands. Student Competition
- 15:12 OC27 The effect of Ashwagandha (Withania somnifera) supplementation on sleep, mood, and cognitive function in healthy university students. A. Murphy¹, K. McLachlan¹, H. Egan¹, M. Bedwell¹ and R. Kimble¹ 1. Sport and Physical Activity Research Institute, The University of the West of Scotland, Blantyre, UK.

Poster Session Three Room: Meeting Room Two Time: 14:30 – 15:30

14:30 OC28 Investigating dietary intakes of pregnant women in an outpatient department using the FIGO Nutrition Checklist and assessing the acceptability of the checklist for use in routine antenatal care. L. Murphy^{1,3}, E. Hokey¹, SL. Killeen², E. O'Sullivan³ and F. McAuliffe¹
 1. UCD Perinatal Research Centre, School of Medicine, University College Dublin, National Maternity Hospital, Dublin, Ireland and 2. Department of Clinical Nutrition & Dietetics, National Maternity Hospital, Dublin and 3. School of Biological, Health & Sport Sciences, TU Dublin.
 Student Competition

14:37 OC29 Developing a nutrition resource for midwives, incorporating a patient and public involvement approach. M Charnley¹, G Stone² and J Abayomi² 1. School of Health & Sport Sciences, Liverpool Hope University, Liverpool, Merseyside, L16 9JD and 2. Faculty of Health, Social Care & Medicine, Edge Hill University, Ormskirk, Lancashire L39 4QP.

14:44 OC30 Preconception health inequalities in Northern Ireland: a focus on obesity and folic acid supplement use from 255,117 pregnancies. E.H. Cassinelli¹, L. Kent¹, M.C. McKinley¹, K.-A. Eastwood^{1,2}, D.A. J. M. Schoenaker^{3, 4, 5}, and L. McGowan¹ 1. Centre for Public Health, School of Medicine, Dentistry and Biomedical Sciences, Queen's University Belfast, Belfast, UK and 2. University Hospitals Bristol NHS Foundation Trust, Bristol, UK and 3. School of Human Development and Health, Faculty of Medicine, University of Southampton, Southampton, UK and 4. MRC Lifecourse Epidemiology Centre, University of Southampton Biomedical Research Centre, University of Southampton and University Hospital Southampton NHS Foundation Trust, Southampton, UK.

14:51 OC31 Facilitating healthy food practices during pre-conception and pregnancy: qualitative insights from across the UK. R. Fallaize¹, J. McClinchy¹, K. Parsons² and L. Whiting³ 1. School of Life and Medical Sciences, University of Hertfordshire, Hatfield, AL10 9AB, UK and 2. MRC (Medical Research Council) Epidemiology Unit, University of Cambridge, Cambridge, CB2 0QQ, UK and 3. School of Health and Social Work, University of Hertfordshire, Hatfield, AL10 9AB, UK.

14:58 OC32 Women's dietary changes before and during pregnancy: a systematic review update. SE. Hillier¹ and EK. Olander² 1. Centre for Midwifery and Women's Health, Bournemouth University, Bournemouth, UK and 2. Centre for Maternal and Child Health Research, City, University of London, London, UK.

15:05 OC33 Dietary fibre and fat intake in postpartum women and its association with income and ethnicity: the Supporting MumS cohort. E. Spyreli¹, D. Gallagher¹, A.S. Anderson², S. Bridges³, C.R. Cardwell¹, E. Coulman⁴, S.U. Dombrowski⁵, C. Free⁶, P. Hoddinott⁷, F. Kee¹, C. McDowell⁸, E. McIntosh⁹, J.V. Woodside¹, M.C. McKinley¹ and on behalf of the Supporting MumS (SMS) research team 1. Centre for Public Health, School of Medicine, Dentistry & Biomedical Sciences, Queen's University Belfast, UK and 2. Centre for Research into Cancer Prevention and Screening, Cancer Division, Medical Research Institute, Ninewells Medical School, Dundee, UK and 3. Bradford Institute for Health Research, Bradford Teaching Hospitals NHS Foundation Trust, Bradford, UK and 4. Centre for Trials Research (CTR), School of Medicine, Cardiff University, Cardiff, UK and 5. Faculty of Kinesiology, University of New Brunswick, Canada and 6. Clinical Trials Unit, Department for Population Health, Faculty of Epidemiology and Population Health, London School of Hygiene & Tropical Medicine, London, UK and 7. Nursing, Midwifery and Allied Health Professions Research Unit, Faculty of Health Sciences and Sport, University of Stirling, UK and 8. Northern Ireland Clinical Trials Unit, Belfast, UK and 9. Health Economics and Health Technology Assessment, Institute of Health and Wellbeing, University of Glasgow, Glasgow, UK.

- 15:12 OC34 Using mixed methods to explore dietary intake in women with recurrent miscarriage: integrating Participant Public Involvement in the research design. Fatima Koroma¹ Jayne Charnock² Katerina Bambang³ Julie Abayomi¹ 1. Faculty of Health, Social Care and Medicine, Edge Hill University and 2. Department of Biology, Edge Hill University and 3. Liverpool Women's NHS Foundation Trust. Student Competition
- 15:19 OC35 Identifying barriers to maternal care in mothers from black, minority ethnic and refugee communities in Islington. Aghili A.¹, Harding J.¹, Illingworth S.J.¹, Wood P.¹ and Bhakta D.¹1. School of Human Sciences, London Metropolitan University and 2, School of Computing and Digital Media, London Metropolitan University. Student Competition

Poster Session Four Room: Meeting Room Three Time: 14:30 – 15:30

- 14:30 OC36 Consumer perceptions towards five popular alternative proteins. A systematic review across Western and Eastern countries. S. Dong¹, T. Benson¹, A. Nugent¹ and M. Dean¹ 1. Institute for Global Food Security, School of Biological Sciences, Queen's University Belfast, Northern Ireland, UK.
 Student Competition
- 14:37 OC37 LIFE Climate Smart Chefs; An Analysis of the Impact of Recipe Reformulation on Environment and Nutrition to Support Sustainable Menu Design (Editions 4 to 6). L. Geaney^{1,2}, H. Stack¹, A. Magnani³, M. Antonelli³, S. Castaldi^{3,4}, D. O'Kelly², F. Douglas², K. O'Brien² and L. B. Kirwan² 1. Munster Technological University, Bishopstown, Cork, T12 P928 and 2. Nutritics Ltd, 22C Town centre mall, Main Street, Swords, Dublin, K67 FY88 and 3. Barilla Foundation, via Madre Teresa di Calcutta, 3/a, Parma, Italy and 4. Università Degli Studi Della Campania "Luigi Vanvitelli", DISTABIF, via Vivaldi 43, 81100, Caserta, Italy.
 Student Competition
- 14:44 OC38 The environmental impact of diet in Latin American populations: a systematic review. C. Araya-Bastias¹, J. Garzillo², J. P. Pell³, D. Lee⁴, and C. Celis-Morales¹. 1. School of Cardiovascular and Metabolic Health, University of Glasgow, Glasgow, UK and 2. Department of Nutrition, School of Public Health, Center for Epidemiological Research in Nutrition and Health, University of São Paulo, São Paulo, Brazil and 3. School Health & Wellbeing, University of Glasgow, Glasgow, UK and 4. Mathematics and Statistics Building, University of Glasgow, Glasgow, UK.
- 14:51OC39Revisiting attitudes and awareness around sustainable diets after 10
years. E. Cleland¹, D. McBey¹, V. Darlene¹, B.J.J. McCormick¹ and J.I.
Macdiarmid¹ 1. The Rowett Institute, University of Aberdeen,
Aberdeen, UK.
- 14:58 OC40 Consumer ranked likely effectiveness of interventions to reduce meat consumption. D. McBey¹, G. Martínez Sánchez², B.J.J. McCormick¹, G.W. Horgan² and J.I. Macdiarmid¹ 1. The Rowett Institute, University of Aberdeen, Aberdeen, UK and 2. BioSS, Aberdeen, UK.

15:05 OC41 Food environment transformations and policy landscape in Zambia: a qualitative inquiry of the ongoing nutrition transition. P. Yiga¹, P.Y. Tan¹, C. Chomba², A. Menefe³, C. Shannon³, P. Kalenga³ and YY. Gong¹ 1. School of Food Science and Nutrition, Faculty of Environment, University of Leeds, UK and 2. Agricultural Consultative Forum, Lusaka, Zambia and 3. Care International Zambia and USA.

15:12 OC42 Longitudinal change in diets among older Irish adults: considerations for sustainable diet transitions. C.L Leydon^{1,2}, J.M Harrington¹ and S.N McCarthy² 1. Centre for Health and Diet Research, School of Public Health, University College Cork, Cork, Ireland and 2. Department of Agrifood Business and Spatial Analysis, Teagasc Food Research Centre, Ashtown, Dublin, Ireland. Student Competition

15:19 OC43 Environmental impact of blue water use by adults aged 18-64 on the Island of Ireland. V. Leighton¹, H. Griffin¹, B. A. McNulty², D. Wright³ L. Brennan² and A.P. Nugent^{1,2} 1. Queen's University Belfast, School of Biological Sciences, Institute for Global Food Security, Belfast, Northern Ireland and 2. University College Dublin, UCD School of Agriculture and Food Science, Dublin, Ireland and 3. Queen's University Belfast, School of Medicine, Dentistry and Biomedical Sciences, Belfast, Northern Ireland.
 Student Competition

Poster Session Five Room: Meeting Room Four Time: 14:30 – 15:30

- 14:30 OC44 Identifying barriers and facilitators to reducing free sugar intakes in consumers exceeding UK recommendations: A framework analysis. L. R. Boxall¹, H. Dalby¹, E. Arden-Close¹, J. James² and K. M. Appleton¹ 1. Department of Psychology, Faculty of Science and Technology, Bournemouth University, Bournemouth, UK and 2. Department of Nursing Science, Faculty of Health and Social Sciences, Bournemouth University, UK. Student Competition
- 14:37 OC45 Exploring uptake and adherence to 'healthy eating' interventions in low socio-economic communities via a thematic narrative synthesis. A. Stephen¹, J. Kyle², J. Allan³, O. Petre¹ and F. Thies¹ 1. The Rowett Institute, University of Aberdeen and 2. Institute of Applied Health Sciences, University of Aberdeen and 3. Division of Psychology, University of Stirling.
 Student Competition
- 14:44 OC46 Insights into knowledge, perceptions, and lifestyle barriers in obesity and type 2 diabetes prevention and management among Indian men: a small-scale survey. F. Patel¹ and G. Farhat¹ 1. Faculty of Health and Education, Manchester Metropolitan University, Manchester, UK.
- 14:51 OC47 Does how we eat affect how much we eat? Associations between covertly measured eating behaviours and food intake over 24 hours in a controlled residential setting. *R.K Price*¹, *H. Spence*¹, *S-D. Zhang*², *T. Redpath*¹ *F. Naseer*¹, *A. Boyd*¹, *M. Martin*¹, *A. Miras*², *C.W. Le Roux*³, *A.C. Spector*⁴ and *M.B.E Livingstone*¹ *1. Nutrition Innovation Centre for Food and Health (NICHE), Ulster University, Coleraine, BT52 1SA, and 2. School of Medicine, Ulster University, Derry~Londonderry, BT48 7JL and 3. Diabetes Complications Research Centre University College Dublin, Ireland and 4. Department of Psychology and Program in Neuroscience, Florida State University, Tallahassee, USA.*

14:58 OC48 Dietary recommendations for reducing free sugar intakes: A pilot study investigating effects following advice to substitute sweet high-sugar foods with different alternatives. K. M. Appleton¹, A. D. Bielat¹, D. J. Guy¹, N. Karami¹ and L. R. Boxall¹ 1. Department of Psychology, Faculty of Science and Technology, Bournemouth University, Bournemouth, UK.

15:05 OC49 The use of social media for promoting nutrition in a conflict-affected country: Facebook Insights. SN. Nyi¹, A. Kaehne¹ and J. Abayomi¹ 1. Faculty of Health, Social Care & Medicine, Edge Hill University, Ormskirk, Lancashire L39 4QP, UK.

15:12 **OC50** Triple burden of malnutrition and its key demographic and socioeconomic determinants among Vietnamese children: insights from the General Nutrition Survey 2020. P.Y. Tan¹, V. S. Som^{1,2}, S. D. Nguyen^{3,4}, X. Tan¹, D.T. Tran⁴, T.N. Tran⁵, V.K. Tran⁵, L. Dye^{1,6}, J. B. Moore¹, S. Caton⁷, H. Ensaff¹, X. Lin⁸, G. Smith⁹ and Y. Y. Gong¹ 1. School of Food Science and Nutrition, Faculty of Environment, University of Leeds, Leeds LS2 9JT, United Kingdom and 2. Section of International Health, Department of Health Sciences, Vrije Universiteit Amsterdam, Amsterdam, The Netherlands and 3. Division of Human Nutrition and Health, Wageningen University and Research, Wageningen, Netherlands and 4. Nutrition Surveillance and Policy Department, National Institution of Nutrition, 48B Tang Ba Ho, Hai Ba Trung District, Ha Noi, Vietnam and 5. Department of Micronutrient, National Institution of Nutrition, 48B Tang Ba Ho, Hai Ba Trung District, Ha Noi, Vietnam and 6. Institute for Sustainable Food and Department of Psychology, University of Sheffield, S1 4DP, United Kingdom and 7. Sheffield Centre for Health and Related Research (SCHARR), School of Medicine and Population Health, University of Sheffield, S1 4DP, United Kingdom and 8. Global Sustainable Development, University of Warwick, Coventry, CV4 7AL, UK and 9. International Life Sciences Institute (ILSI) Southeast Asia Region, 18, Mohamed Sultan Road, #03-01, Singapore 238967.

15:19 OC51 Comparison of Food Accessibility and Acculturation among South Asians in the United Kingdom and India: A Photovoice Study. D. James¹, R.K. Vijayakumaran¹, G. Gayathri² 1. Department of Rehabilitation and Sport Sciences, Bournemouth University, Bournemouth, UK and 2. Department of Clinical Nutrition, Faculty of Allied Health Sciences, Sri Ramachandra Institute of Higher Education & Research.

Poster Session Six Room: Meeting Room Five Time: 14:30 – 15:30

14:30 OC52 The effects of different portion sizes on child food consumption and satiety: an exploratory study. L. Acolatse¹, C. Logue¹, L. K. Pourshahidi¹, M.T. McCann¹ and M.A.¹ 1. Kerr Nutrition Innovation Centre for Food and Health (NICHE), School of Biomedical Sciences, Ulster University, Coleraine, Northern Ireland, UK.

14:37 OC53 Dietary patterns and risk of childhood overweight/obesity or metabolically unhealthy childhood obesity: A systematic review and meta-analysis. A. Kyrkili¹, G. Saltaouras¹, V. Bountziouka², M. Georgoulis¹, E. Bathrellou¹, M. Yannakoulia¹ and M. Kontogianni¹ 1. Department of nutrition and Dietetics, School of Health Sciences and Education, Harokopio University, Athens, Greece and 2. Computer Simulation, Genomics and Data Analysis Laboratory, Department of Food Science and Nutrition, School of the Environment, University of the Aegean, Lemnos, Greece.

14:44 **OC54** Comparison of dietary intake and physical activity in children and adolescents with or without non-alcoholic fatty liver disease. A. Kyrkili¹, G. Petsoukis¹, A. Vourdoumpa³, D. Koutaki³, G. Paltoglou³, C. Katsagoni², M. Rogalidou⁴, A. Papadopoulou⁴, M. Papadopoulou³, E. Charmandari³ and M. Kontogianni¹ 1. Department of nutrition and Dietetics, School of Health Sciences and Education, Harokopio University, Athens, Greece and 2. Department of Clinical Nutrition, "Agia Sofia" Children's Hospital, Athens, Greece and 3. Division of Endocrinology, Metabolism and Diabetes, 1st Department of Pediatrics, National and Kapodistrian University of Athens Medical School, "Agia Sofia" Children's Hospital, Athens, Greece and 4. Division of Paediatric Gastroenterology & Hepatology, 1st Department of Paediatrics, National and Kapodistrian University of Athens, "Agia Sofia" Children's Hospital, Athens, Greece.

14:51OC55Exploring fruit and vegetable intakes in children in two areas of North
Yorkshire - Cooking in Yorkshire Project. M. Vidal¹, K. Vaughan¹, C.
Nykjaer² and J. Cade¹ 1. School of Food Science & Nutrition, University
of Leeds and 2. Faculty of Biological Sciences, University of Leeds.

14:58 OC56 Meal patterns and risk of childhood obesity and metabolically unhealthy obesity: a systematic review of the evidence, methodological issues and research gaps. G. Saltaouras¹, A. Kyrkili¹, E. Bathrellou¹, M. Georgoulis¹, M. Yannakoulia¹, V. Bountziouka² and M. Kontogianni¹ 1. Department of nutrition and Dietetics, School of Health Sciences and Education, Harokopio University, Athens, Greece and 2. Computer Simulation, Genomics and Data Analysis Laboratory, Department of Food Science and Nutrition, School of the Environment, University of the Aegean, Lemnos, Greece.

15:05 OC57 A review of the sugar content in children's foods across major UK supermarkets, cookbooks, and online resources: progress and challenges in the UK's sugar reduction efforts. K. Olorunnisola¹, A. Setarehnejad¹, R.M Fairchild¹ 1. Department of Healthcare and Food/Food Industry Centre, School of Health Sciences, Cardiff Metropolitan University, Cardiff, UK. Student Competition

- 15:12 OC58 Associations between socio-economic status in childhood and cardiovascular disease risk in adulthood. E. Molloy¹, C. Corish¹, A. Douglass¹ and C. Kelleher¹.1. School of Public Health, Physiotherapy and Sports Science, University College Dublin, Dublin 4, Republic of Ireland.
 Student Competition
- 15:19 OC59 Effect of health and agriculture services integration on the nutritional status of 4-6 years old children in rural Ethiopia. G.A Mersha¹, B.T Gutema³, S.D Henauw¹ and S. Abbeddou¹ 1. Department of Public Health and Primary Care, Ghent University, Belgium and 2. Food Science and Nutrition Research Directorate, Ethiopian Public Health Institute, Ethiopia and 3. School of Public Health, College of Medicine and Health Sciences, Arba Minch University, Arba Minch, Ethiopia. Student Competition

Poster Session Seven Room: Meeting Room Six Time: 14:30 – 15:30

14:30 OC60 Differential Effects of Milk, Yogurt, and Cheese on Insulin Sensitivity, Hepatic Function, and Gut Microbiota in Diet-Induced Obese Mice. E. Yuzbashian¹, CB. Chan^{1,4} and S. Ussar^{2,3} 1. Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, Alberta, Canada and 2. RU Adipocytes and Metabolism, Helmholtz Diabetes Center, Helmholtz Zentrum München, Germany Research Center for Environmental Health GmbH, Neuherberg, Germany and 3. German Center for Diabetes Research (DZD), Neuherberg, Germany and 4. Department of Physiology, University of Alberta, Edmonton, Alberta, Canada.

- 14:37 OC61 Iron bioacessibility from fava bean-fortifed white wheat flour following simulated in vitro gastrointestinal digestion. R. Wang¹, B.H. Bajka¹, G.O. Latunde-Dada¹ and P.A. Sharp¹ 1. Department of Nutritional Sciences, School of Life Course & Population Sciences, King's College London, London, UK. Student Competition
- 14:44 OC62 Sensory evaluation of pea and milk protein hydrolysates used to develop protein-fortified tomato soup. Mahrokh Jamshidvand¹, Richard J. FitzGerald² and Maria Dermiki^{1*} 1. Department of Health and Nutritional Sciences, Atlantic Technological University, Sligo, F91 YW50, Ireland and 2. Department of Biological Sciences, University of Limerick, V94 T9PX, Ireland.
 Student Competition
- 14:51 OC63 Enhancing the acceptability of Stevia sweetened cookies through the addition of Inulin: A study on texture, chemical attributes, and taste perception. M. Watawana¹, A. Banu¹, G. Ryan¹, M. Pogorzalek¹, D. Granato^{1,2,3} and F. Hoffmann Sarda^{1,2,3} 1. Department of Biological Sciences, University of Limerick, Limerick, Ireland and 2. Health Research Institute, University of Limerick, Limerick and 3. Bernal Institute, University of Limerick, Limerick. Student Competition

14:58 OC64 From bean to bottle - A snapshot review of the caffeine-containing food supplements notified to the Food Safety Authority of Ireland between January 2023 and December 2023. S. Nic Sheoin^{1,2}, M.G. Hogan^{1,3}, N. Clarke¹, L. Farrell¹, S. Walsh¹, C. Grimes¹, C.B. O'Donovan¹.
 1. The Food Safety Authority of Ireland, Dublin 1, Ireland. and 2. School of Biological Health & Sports Sciences, Technological University

Dublin, Dublin 7, Ireland and 3. School of Agriculture and Food Science, University College Dublin, Dublin 14, Ireland. Student Competition

- 15:05 OC65 A comparative assessment of specified nutrients and biochemicals in kimchi before and after freeze drying and powdering. J. Webster¹, K. Gordon-Smith¹, KR Ahmadí¹, H. Mathur², J. Leech² and T. Grassby¹ School of Biosciences and Medicine, FHMS, University of Surrey, Guildford, GU2 7XH and 2. Teagasc Food Research Centre, Moorepark, Fermoy, 61 C996 Co. Cork, Ireland. Student Competition
- 15:12 OC66 Are ham sandwiches as good for you as they say? A review of the compliance of nutrition and health claims on breads and deli meats on the Irish market. *M.G.* Hogan^{1,2}, *S.* Nic Sheoin^{1,3}, *N.* Clarke¹, *L.* Farrell¹, *C.* Grimes¹, *S.* Walsh¹, *S.* O'Mahony^{1,4} and C.B. O'Donovan¹ 1. The Food Safety Authority of Ireland, Dublin 1, Republic of Ireland and 2. School of Agriculture and Food Science, University College Dublin, Dublin 4, Republic of Ireland and 3. School of Biological, Health & Sports Sciences, Technological University Dublin, Dublin 7, Republic of Ireland and 4. Institute of Food and Health, University College Dublin, Dublin 4, Republic of Ireland. Student Competition

Poster Session Eight Room: Meeting Room Seven Time: 14:30 – 15:30

14:30	OC67	Gut and digestive health of Irish athletes post-concussion. <i>E.</i> Finnegan ¹ , E. Daly ¹ and L. Ryan ¹ 1. Department of Sport, Exercise and Nutrition, Atlantic Technological University (ATU), Galway, Ireland.
14:37	OC68	Nutrition beliefs, and practices of ultra-endurance runners in Ireland for gastrointestinal symptom management. T. Ryan ¹ , E. Daly ¹ , and L. Ryan ¹ 1. Department of Sport, Exercise and Nutrition, Atlantic Technological University, Galway, Ireland. Student Competition
14:44	OC69	Exploring food choice influences in athletes and active populations in Ireland. Conor C. Carey ¹ , Eve M. Creedon ¹ , Fionn Molloy ¹ , Morgan Lewis ¹ , Ben Leen Smith ¹ and Elaine K. McCarthy ^{1,2} 1. School of Food and Nutritional Sciences, University College Cork, Ireland and 2. INFANT Research Centre, University College Cork, Ireland.
14:51	OC70	Protein supplementation practices and the risk of low protein intake among athletes and active adults in Ireland. Morgan Lewis ¹ , Conor C. Carey ¹ , Ben Leen Smith ¹ , Kevin D. Cashman ¹ , Alice Lucey ¹ and Elaine K. McCarthy ^{1,2} 1. Cork Centre for Vitamin D and Nutrition Research, School of Food and Nutritional Sciences, University College Cork, Ireland and 2. INFANT Research Centre, University College Cork, Ireland.
14:58	OC71	A Cross-Sectional Exploration of Nutritional Wants and Needs of Female Athletes during Pregnancy and Postpartum in the United Kingdom and Republic of Ireland. C. V. Caro ^{1,5} , Z. Bell ¹ , M. Renard ^{1,2} , E. Brown ¹ , P. Kloskowska ³ , L. Edwards ⁴ , A. C. Flynn ⁵ , and F. Lavelle ¹ 1. Department of Nutritional Sciences, School of Life Course & Population Sciences, King's College London, London, United Kingdom and 2. SHE Research Group, Department of Sport and Health Sciences, Technological University of the Shannon, Athlone, Ireland and 3. Department of Physiotherapy, School of Life Course & Population Sciences, King's College London, London, United Kingdom and 4. King's Sport & Wellness, King's College London, London, United Kingdom and 5. School of Population Health, Royal College of Surgeons Ireland, Dublin, Ireland.

15:05 OC72 An investigation into nutritional knowledge of Irish rugby coaches. N Lynch¹, G Sweeney², K. Cradock¹, A Mullee¹, 1. Department of Health and Nutritional Science, ATU Sligo and 2. Irish Rugby Football Union, High Performance Centre, Abbotstown, Co. Dublin. Student Competition

15:12 OC73 Exercise-induced sweating decreases 24-h sodium balance compared to rest in recreational exercisers. H. Z. Macrae¹, T. Cable¹, L. Mougin¹, H. Nuttall¹, E. Liddell¹, B. Bellisario¹, D. Locke¹, D. Miller¹, A. J. McCubbin², M. P. Funnell³, V. L. Goosey-Tolfrey⁴ and L. J. James¹
1. School of Sport, Exercise and Health Sciences, Loughborough University, UK and 2. Department of Nutrition, Dietetics and Food, Monash University, Australia and 3. NIHR Applied Research Collaboration Centre - East Midlands, Leicester Diabetes Centre, UK and 4. Peter Harrison Centre for Disability Sport, Loughborough University, UK.
Student Competition

Oral Session One Room: Assembly Hall Time: 16:00 – 17:30

16:00 **OC74** Carbon footprint of food and beverage purchases: a preliminary analysis using loyalty-card transaction data from a UK supermarket. M. Dineva^{1,2}, M.A. Green³, M.S. Gilthorpe⁴, M. Thomas⁵, N. Sritharan⁵, A.M. Johnstone⁶ and M.A. Morris^{1,2}1. School of Food Science and Nutrition, Faculty of Environment, University of Leeds, Leeds, UK and 2. Leeds Institute for Data Analytics, University of Leeds, Leeds, UK and 3. Department of Geography and Planning, University of Liverpool, Liverpool, UK and 4. Obesity Institute, Leeds Beckett University, Leeds, UK and 5. Sainsbury's PLC, London, UK and 6. The Rowett Institute, University of Aberdeen, Aberdeen, UK. 16:15 **OC75** What do consumers want in a local and sustainable plant-based product? Findings from co-creation workshops on the island of Ireland. T. Benson¹, A. Nugent¹ and M. Dean¹ 1. Institute for Global Food Security, School of Biological Sciences, Queen's University Belfast, Belfast, Northern Ireland. 16:30 **OC76** Integrating sustainability considerations into dietary guidelines: country practices and global guidance. A. Islas-Ramos¹, L. Orlandi¹, T. Buendia¹, R. Wijesinha-Bettoni¹ and F. Hachem¹ 1. Food and Agriculture Organization of the United Nations Viale delle Terme di Caracalla sn 00153 Rome, Italy. 16:45 **OC77** Navigating Life Cycle Analysis (LCA) Databases; Insights for Shifting Towards Sustainable Dietary Patterns. E.O'Sullivan¹, D'O Kelly¹, S.Hogan¹ and L.B. Kirwan¹ 1. Nutritics Ltd, 22C Town centre mall, Main Street, Swords, Dublin, K67 FY88. 17:00 **OC78** Achieving SDG 12: impact of food choice, food waste and dignity. S. Sumpter¹, N. Nancheva², R. Ranta³, D. Bhakta⁴, and H. Mulrooney^{1,4}. 1. School of Life Sciences, Pharmacy & Chemistry, Kingston University London and 2. School of Arts, Humanities and Social Sciences, Roehampton University and 3. School of Law, Social and Behavioural Sciences, Faculty of Business and Social Science, Kingston University London and 4. School of Human Sciences, London Metropolitan University.

17:15 OC79 Impact of reducing dietary greenhouse gas emissions on micronutrient intakes: preliminary results from the MyPlanetDiet randomised controlled trial. U. M. Leonard¹, E. Arranz^{1,2}, M. E. Kiely¹ 1. Cork Centre for Vitamin D and Nutrition Research, School of Food and Nutritional Sciences, University College Cork, Cork, Ireland and 2. Autonoma University of Madrid, Ciudad Universitaria de Cantoblanco, 28049 Madrid, Spain. Student Competition

Oral Session Two Room: Minor Hall Time: 16:00 – 17:30

16:00 OC80 Unsupervised machine learning to determine dietary protein distribution among New Zealand vegans across time periods of the day. Bi Xue Patricia Soh¹, Matthieu Vignes², Nick W Smith¹, Pamela R. von Hurst³ and Warren C. McNabb¹ 1. Sustainable Nutrition Initiative, Riddet Institute, Massey University, Palmerston North, New Zealand and 2. School of Mathematical and Computational Sciences, Massey University, Palmerston North, New Zealand and 3. School of Sport Exercise and Nutrition, College of Health, Massey University, Auckland, New Zealand. Student Competition

16:15 OC81 Using artificial intelligence to estimate the nutritional content of meal photos: an evaluation of ChatGPT-4. C. O'Hara¹, G. Kent¹, A.C. Flynn¹, E.R. Gibney^{2,3}, C.M. Timon¹. 1. School of Population Health, Royal College of Surgeons in Ireland, Dublin, Ireland and 2. UCD Institute of Food and Health, University College Dublin, Dublin, Ireland and 3. School of Agriculture and Food Science, University College Dublin, Dublin, Ireland.

16:30 OC82 Utilization of Extended Reality (XR) technology in nutrition studies: A systematic review. A. Mullath Ullas¹, A. Owolabi², J. McArdle³ and B. Ellahi⁴ 1. Chester Medical School, University of Chester, UK and 2. Research Fellow, Faculty of Medicine, Dentistry and Life Sciences, University of Chester, UK and 3. Director of Health and Clinical Strategy, Marketing, Tourism and Destinations, University of Chester, UK and 4. Professor, Public Health and Nutrition, Faculty of Health and Social Care, University of Chester, UK.

16:45 OC83 Predicting diet quality and food consumption using contextual factors: an application of machine learning models. N.R Tran¹, Y. Zhang¹, R.M Leech¹ and S.A McNaughton² 1. Institute for Physical Activity and Nutrition (IPAN), School of Exercise and Nutrition Sciences, Deakin University, Geelong, VIC 3220, Australia and 2. Health and Well-Being Centre for Research Innovation, School of Human Movement and Nutrition Sciences, University of Queensland, St Lucia, QLD 4067, Australia.

17:00 OC84 Comparison of online food composition databases including those in nutritional assessment tools. G. Williams¹, A. Hamilton¹ and J.E. Cade^{1,2} 1. Dietary Assessment Ltd, Nexus Building, Leeds, UK and 2. Nutritional Epidemiology Group. School of Food Science and Nutrition, University of Leeds, UK.

17:15 OC85 Nutritics GB23 database: an enhancement of the McCance Widdowson's The Composition of Foods Integrated Dataset (CoFID) database. Catriona Innih ^{1,2}, D. O'Kelly², F. Douglas², C. Arenhart², K O'Brien², L. B. Kirwan² 1. University College Dublin, School of Agriculture and Food Science, Dublin 4, D04 V1W8 and 2. Nutritics Ltd, 22C Town centre mall, Main Street, Swords, Dublin, K67 FY88. Student Competition

Oral Session Three Room: Conference Room Time: 16:00 – 17:30

16:00 OC86 Influence of adiposity on the prevalence of iron deficiency in women of reproductive age: data from the UK National Diet and Nutrition Survey 2008-2019 (NDNS). S.P. Demirdjian¹, M.A. Kerr¹, M.S. Mulhern¹, P. Thompson¹, M. Ledwidge² and M.T. McCann¹ 1. Nutrition Innovation Centre for Food and Health (NICHE), Ulster University, Coleraine, United Kingdom and 2. School of Medicine, University College Dublin. Student Competition

16:15 OC87 Effect of fish consumption on the interactions between the gut microbiota and inflammatory markers: Results from the iFISH study. Cealan O Henry¹, Emeir M McSorley¹, Marie C Conway¹, Alison J Yeates¹, Maria S Mulhern¹, Conall S Strain^{2,3}, Toni Spence¹, Edwin van Wijngaarden⁴, J J Strain¹ and Philip J Allsopp¹ 1. Nutrition Innovation Centre for Food and Health (NICHE), Ulster University, Coleraine BT52 1SA, Ireland and 2. Teagasc Food Research Programme, Moorepark, Fermoy, Co, Cork T12 YN60, Ireland and 3. APC Microbiome Ireland, University College Cork, Cork, Ireland and 4. School of Medicine and Dentistry, University of Rochester, Rochester, USA.

16:30 OC88 Associations of pulse-rich diets with risk of cancer incidence and mortality: findings from the UK Biobank prospective cohort study. Y Kaimila^{1,4}, O. Olotu¹, M Clegg^{1,2}, K.G Jackson^{1,2,3} and J.A Lovegrove^{1,2,3} 1. Hugh Sinclair Unit of Human Nutrition and 2. Institute of Food, Nutrition and Health and 3. Institute for Cardiovascular Metabolic Research, Harry Nursten Building, Whiteknights, University of Reading, Reading, RG6 6DZ. UK and 4. The University of Malawi, P.O Box 280, Zomba. Malawi.

- 16:45 OC89 Effect of prebiotic supplementation in markers of intestinal permeability, pH and mucosal immunity. L. Torquati¹, M.Batool¹ and J. Bowtell¹ 1. Public Health and Sport Science, Medical School, University of Exeter, Exeter, UK
- 17:00 OC90 Reducing free sugar intakes: the effects of dietary sweet taste modification on sweet taste perceptions and sweet food intake. A. D. Bielat¹, P. J. Rogers², and K. M. Appleton¹ 1. Department of Psychology, Faculty of Science and Technology, Bournemouth University, Bournemouth, UK and 2. School of Psychological Science, University of Bristol, Bristol, UK.

17:15 OC91 Cross-comparison of diet quality scores in relation to cardiometabolic health, cognitive function, and ecological sustainability parameters: Results from the Rhineland Study. J. F. Tavares¹, U. Nöthlings² and M. M.B. Breteler^{1,3} 1. German Center for Neurodegenerative Diseases (DZNE), Department of Population Health Sciences, Bonn, Germany and 2. University of Bonn, Institute of Nutrition and Food Science, Nutritional Epidemiology, Bonn, Germany and 3.University of Bonn, Institute for Medical Biometry, Informatics and Epidemiology (IMBIE), Bonn, Germany. Student Competition

Poster Session One Room: Board Room Time: 16:00 – 17:30

16:00	OC92	Assessing the environmental impact of food consumption in Northern
		Ireland, a focus on greenhouse gas emissions. H. Griffin ¹ , V. Leighton ¹ , B. A.
		McNulty ² , D. Wright ³ L. Brennan ² and A.P. Nugent ^{1,2} 1. Queen's University
		Belfast, School of Biological Sciences, Institute for Global Food Security,
		Belfast, Northern Ireland and 2. University College Dublin, UCD School of
		Agriculture and Food Science, Dublin, Ireland and 3. Queen's University
		Belfast, School of Medicine, Dentistry and Biomedical Sciences, Belfast,
		Northern Ireland.
		Student Competition

- 16:07 OC93 The nutritional profile of plant-based meat alternatives vs. traditional plant proteins: A product audit. L. Lindberg¹, J.V. Woodside¹, C. Kelly², M. Robinson² and A.P Nugent² 1. Centre for Public Health, Queen's University Belfast, BT12 6BJ, UK and 2. School of Biological Sciences, Queen's University Belfast, BT9 5DL, Belfast, UK. Student Competition
- 16:14 OC94 An in-depth exploration of food sustainability practices in industry from initial concept to development and evaluation. S. O'Donovan¹, Aisling Moran¹, Maria McDonagh¹, and L. Ryan¹.1. Department of Sport, Exercise and Nutrition, Atlantic Technological University, Galway, Ireland.
- 16:21 OC95 Does sociodemographic strata determine local access to plant-based meat alternatives? D. McBey, B.J.J¹, McCormick¹, M. Hussain¹ and J.I. Macdiarmid ¹ 1. The Rowett Institute, University of Aberdeen, Aberdeen, UK.
- 16:28 OC96 Large-scale mapping of retail food and beverage products to environmental sustainability metrics. M. Dineva^{1,2}, M.A. Green³, M.S. Gilthorpe⁴, M. Thomas⁵, N. Sritharan⁵, A.M. Johnstone⁶ and M.A. Morris^{1,2};
 1. School of Food Science and Nutrition, Faculty of Environment, University of Leeds, Leeds, UK and 2. Leeds Institute for Data Analytics, University of Leeds, Leeds, UK and 3. Department of Geography and Planning, University of Liverpool, Liverpool, UK and 4. Obesity Institute, Leeds Beckett University, Leeds, UK and 5. Sainsbury's PLC, London, UK and 6. The Rowett Institute, University of Aberdeen, Aberdeen, UK.
- 16:35 OC97 A qualitative investigation into the digital competencies and food sustainability knowledge employers require of graduates in the food industry across Europe. A. Moran¹, M. McDonagh¹, S. O'Donovan¹, L. Ryan¹
 1. Department of Sport, Exercise and Nutrition, Atlantic Technological University, Galway, Ireland.

16:42 OC98 Exploring the relationship between Nature connectedness and food-related behaviours: findings from a cross-sectional survey of Irish consumers. M. Brennan¹, E. Battersby², S. Dekkar², S. Mulligan¹, K. McAdoo³ and A. Moore Heslin³ 1. School of Biological, Health, and Sports Sciences, Technological University Dublin, Grangegorman, D07 EWV4 Dublin, Ireland and 2. School of Agriculture and Food Science, University College Dublin, Belfield, D04 V1W8 Dublin, Ireland and 3. Airfield Estate, Overend Way, Dundrum, D14 EE77 Dublin, Ireland.

16:49 OC99 Associations between the EAT-Lancet Index, nutrient intake and compliance with UK dietary guidance in UK adults. D. Albabtain¹, M. Weech¹, R. Fallaize^{1,2}, F. Hwang³ and J.A. Lovegrove¹1. Hugh Sinclair Unit of Human Nutrition and Institute for Cardiovascular and Metabolic Health, University of Reading, Whiteknights, Reading, RG6 6DZ, UK and 2. School of Life and Medical Science, University of Hertfordshire, College Lane, Hatfield, AL10 9AB, UK and 3. Biomedical Engineering Section, School of Biological Sciences, University of Reading, Whiteknights, Reading, RG6 6DH, UK.
 Student Competition

16:56 OC100 Adolescent boys and protein: a first cut at developing environmentally sustainable food-based dietary guidelines. M. G. Thompson^{1,2}, R. De Luca^{1,3}, M. G. Hogan^{1,4}, S. Nic Sheoin^{1,3}, O. C. Lyons^{1,2} and M. A. T. Flynn^{1,2}
 1. Food Safety Authority of Ireland, Dublin 1, Republic of Ireland and 2. School of Biomedical Sciences, Ulster University, Coleraine, Northern Ireland and 3. School of Biological, Health & Sports Sciences, Technological University Dublin, Dublin 7, Republic of Ireland and 4. School of Agriculture and Food Science, University College Dublin, Dublin 4, Republic of Ireland.

17:03 OC101 Stakeholders' perspectives on promoting sustainable and healthy dietary behaviours within the university setting: qualitative insights from the PLAN'EAT study. L.D. Devine¹, A.M. O'Sullivan¹, P.S. Elliott¹, M.F. O'Neill¹ and E.R. Gibney¹. 1. Institute of Food and Health, School of Agriculture and Food Science, University College Dublin, Dublin 4, Ireland.

Poster Session Two Room: Meeting Room One Time: 16:00 – 17:30

16:00 OC102 Global Trends in Vitamin D Fortified Food Product Launches. *SN McCarthy*¹ *and ME Kiely*² *1. Department of Agrifood Business, Teagasc Food research Centre, Dublin, Ireland and 2. Cork Centre for Vitamin D and Nutrition Research, School of Food and Nutritional Sciences, University College Cork, Cork, Ireland.*

16:07 OC103 Consumer attention to labelling and market potential of vitamin D-(bio)enriched meat products. E.J. Rosbotham¹, S. Gallagher², E.J. Taylor¹, C.I.R. Gill¹, E.J. McDonald³, W.C. McRoberts⁴ and L.K. Pourshahidi¹ 1. Nutrition Innovation Centre for Food and Health (NICHE), School of Biomedical Sciences, Ulster University, Coleraine, UK and 2. School of Psychology, Ulster University, Coleraine, UK and 3. Humanativ, Mitchelstown, Ireland and 4. Agri-Food and Biosciences Institute, Belfast, UK. Student Competition

- 16:14 OC104 Vitamin D content of products recently launched on to the marketplace findings from the MINTEL Global New Products Database. E.J. Taylor¹, R.K. Price¹, L. Hollywood² and L.K. Pourshahidi¹
 1. Nutrition Innovation Centre for Food and Health (NICHE), School of Biomedical Sciences, Ulster University, Coleraine, UK and 2. Business School, Ulster University, Belfast, UK.
 Student Competition
- 16:21 OC105 Prevalence of vitamin D insufficiency and associations between 25(OH)D concentrations and health outcomes in children aged 4 – 11 years in the north of Ireland. Emily Royle¹, Emeir M. McSorley¹, L. Kirsty Pourshahidi¹, David Armstrong², and Pamela J. Magee¹ 1. Nutrition Innovation Centre for Food and Health (NICHE), School of Biomedical Sciences, Ulster University, Coleraine, Northern Ireland, BT52 1SA and 2. Department of Rheumatology, Altnagelvin Hospital, Western Health and Social Care Trust, Londonderry, UK.

16:28 OC106 The effect on habitual dietary vitamin D intake of changing to a plantbased diet. TM Robertson¹, C Baldwin¹, E Green¹, F Hammond¹, AL Darling¹, K Hart¹, MM Raats², J Li³, C Martin³, SA Lanham-New¹ and MJ Warren⁴ 1. Department of Food, Nutrition and Exercise Sciences, School of Biosciences, Faculty of Health and Medical Sciences, University of Surrey, Guildford, UK and 2. Institute of Sustainability, University of Surrey, Guildford, UK and 3. Department of Biochemistry
and Metabolism, John Innes Centre, Norwich, UK and 4. Food Microbiome and Health, Quadram Institute Biosciences, Norwich, UK.

- 16:35 OC107 The effect of vitamin D3 supplementation on vitamin D status and associated health outcomes in children. Emily Royle¹, Emeir M. McSorley¹, L. Kirsty Pourshahidi¹, David Armstrong², and Pamela J. Magee¹ 1. Nutrition Innovation Centre for Food and Health (NICHE), School of Biomedical Sciences, Ulster University, Coleraine, Northern Ireland, BT52 1SA and 2. Department of Rheumatology, Altnagelvin Hospital, Western Health and Social Care Trust, Londonderry, UK. Student Competition
- 16:42 OC108 Vitamin D supplementation and bone health in menopausal women: a systematic review of randomised controlled trials. V. Riordan¹ and S.Nally^{1,2} 1. Department of Biological Sciences, University of Limerick, Limerick, Ireland and 2. Health Research Institute, University of Limerick, Limerick, Ireland.
 Student Competition
- 16:49 OC109 A pilot cross-sectional study of vitamin D status, demographic factors, and SARS-CoV-2 infection in a diverse south-east London patient population at the start of the COVID-19 pandemic. A. Sulkowski¹, A. Sobczyńska-Malefora^{1, 2}, L. Harbige³ and D. J. Harrington^{2, 4} 1. Faculty of Life Sciences and Medicine, King's College London, London, UK and 2. The Nutristasis Unit, Synnovis, St Thomas' Hospital, London, UK and 3. Centre for Health and Life Sciences Research, London Metropolitan University, London, UK and 4. School of Medicine, University of Surrey, Guildford, UK.
- 16:56 OC110 A systematic review to evaluate the efficacy and safety of high-dose vitamin D supplementation in adults with cystic fibrosis. J Hutchinson¹, M Dunnage², D Bhakta¹, A Aghili¹, S Illingworth¹ 1. School of Human Health Sciences, London Metropolitan University, London, UK and 2. St. Bartholomew's Hospital, London, UK.
 Student Competition
- 17:03 OC111 Body composition, body mass index, waist circumference and perimenopausal symptoms in women living in Ireland. M.B. Murphy¹, R. Owens², L. Edwards³, G.J. Cuskelly⁴ and P.M. Heavey⁵ 1,2,3,4,5 SHE (Sport Health and Exercise) Research Group, Department of Sport & Health Sciences, Technological University of the Shannon, Athlone, Co. Westmeath, Republic of Ireland.
 Student Competition

17:10 OC112 Reduction in menopause symptom severity following a personalised app-based dietary intervention program: a pre-post longitudinal analysis of the ZOE PREDICT 3 study. G. Pounis¹, K. M. Bermingham ^{1,2}, J. Capdevila ², W. J. Bulsiewicz ^{2,3}, A. Roomans ², A. Creedon ², F. Amati ², J. Wolf ², T. D. Spector ^{1,4}, W. L. Hall ¹ and S. E. Berry¹ 1. Department of Nutritional Sciences, School of Life Course Sciences, King's College London, London, UK and 2. Zoe Ltd, London, UK and 3. Emory University School of Medicine, Atlanta, USA and 4. Department of Twin Research and Genetic Epidemiology, King's College London, London, UK.

17:17 OC113 Diet quality is associated with lower prevalence of menopausal symptoms: the ZOE PREDICT 3 study. G. Pounis¹, K. M. Bermingham ^{1,2}, J. Capdevila ², W. J. Bulsiewicz ^{2,3}, A. Roomans², A. Creedon ², F. Amati ², J. Wolf ², T. D. Spector ^{1,4}, W. L. Hall ¹ and S. E. Berry¹ 1. Department of Nutritional Sciences, School of Life Course Sciences, King's College London, London, UK and 2. Zoe Ltd, London, UK and 3. Emory University School of Medicine, Atlanta, USA and 4. Department of Twin Research and Genetic Epidemiology, King's College London, London, UK.

Poster Session Three Room: Meeting Room Two Time: 16:00 – 17:30

16:00 OC114 Partial replacement of milk and dairy products with plant-based alternatives – would fortification of bread reduce the impact on iodine intake? K. Nicol¹, A.P. Nugent² J.V. Woodside³, K.H. Hart¹ and S.C. Bath¹ 1. School of Biosciences, University of Surrey GU2 7XH and 2. School of Biological Sciences, Queen's University Belfast, BT9 5DL, and 3. School of Medicine, Dentistry and Biomedical Sciences. Queen's University Belfast, BT12 6BJ.
 Student Competition

16:07 OC115 Iodine fortification of plant-based dairy and fish alternatives – changes over a four-year period and implications for consumer health. K. Nicol¹, A.P. Nugent² J.V. Woodside³, K.H. Hart¹ and S.C. Bath¹ 1. School of Biosciences, University of Surrey GU2 7XH and 2. School of Biological Sciences, Queen's University Belfast, BT9 5DL, and 3. School of Medicine, Dentistry and Biomedical Sciences. Queen's University Belfast, BT12 6BJ.
 Student Competition

- 16:14 OC116 Plant-based dairy alternatives in Ireland: identifying best choices for consumers and the planet. R. De Luca^{1,2}, M.G. Thompson^{1,3,} O.C. Lyons^{1,3}, M.A.T. Flynn^{1,3} 1. Food Safety Authority of Ireland, Dublin, Ireland and 2. Technological University Dublin, Dublin, Ireland, 3. Ulster University, Coleraine, UK. Student Competition
- 16:21 OC117 Iodine concentration of fortified and unfortified plant-based alternatives to milk, dairy products, eggs and fish. S. C. Bath¹, K. Nicol¹, L. Soutter¹, B. Benny¹, D. Y Yilmaz¹, H. Goenaga-Infante², S.Hill² and M. P. Rayman¹. 1. Department of Nutritional Sciences, Faculty of Health and Medical Sciences, University of Surrey, Guildford, Surrey, and 2. LGC, Queens Road, Teddington, Middlesex.

16:28 OC118 Modelled replacement of meats by dairy products and incident coronary heart disease: Evidence from the UK Biobank Study. Y.D. Vogtschmidt^{1,2,} S.S. Soedamah-Muthu^{2,3}, D.I. Givens² and J.A. Lovegrove^{1,2} 1. Hugh Sinclair Unit of Human Nutrition and Institute for Cardiovascular and Metabolic Research, Department of Food and Nutritional Sciences, University of Reading, Reading, UK and 2. Institute for Food, Nutrition and Health, University of Reading, Reading, UK and 3. Center of Research on Psychological Disorders and Somatic Diseases (CoRPS), Department of Medical and Clinical

Psychology, Tilburg University, Tilburg, the Netherlands. **Student Competition**

- 16:35 OC119 The nutritional contribution of dairy intakes to the diets of Irish adolescents: based on data from the National Teens' Food Survey II. Emma Kane¹, Maria Buffini¹, Laura Kehoe^{2,3}, John M Kearney⁴, Albert Flynn³, Janette Walton² and Breige McNulty¹ 1. UCD Institute of Food and Health, School of Agriculture & Food Science, University College Dublin, Dublin, Ireland and 2. Department of Sciences, Munster Technological University, Cork, Ireland and 3. School of Food and Nutritional Sciences, University College Cork, Ireland and 4. School of Biological, Health & Sport Sciences, Technological University Dublin, Dublin, Ireland.
- 16:42 OC120 Consumption of a milk low in lactose high in intrinsic fiber is associated with improved nutrient intake adequacies in Chinese adults: a diet modelling study. F. Zhang¹, C. Debras², J. Matta² and D. Wang² 1. Nestlé Institute of Health Sciences, Nestlé Research, Beijing, China and 2. Nestlé Institute of Health Sciences, Nestlé Research, Lausanne, Switzerland.
- 16:49 OC121 Comparison of mineral profiles between cows' milk and plant-based beverages in the UK. R.J. Wall¹, M.E. Clegg², L. Smith³, L., M. Cain⁴ and S. Stergiadis¹1. Department of Animal Sciences, School of Agriculture, Policy and Development, University of Reading, Reading, UK and 2. School of Food and Nutritional Sciences, University College Cork, Cork, Ireland and 3. Department of Agri-Food Economics and Marketing, School of Agriculture, Policy and Development, University of Reading, Reading, Reading, UK and 4. Cranfield Environment Centre, Cranfield University, Cranfield, UK.
- 16:56 OC122 Iodised salt in the UK: a review of its availability and presence in processed foods. Joanne Tattersall¹, Margaret P. Rayman¹, Sokratis Stergiadis², Sarah C. Bath¹ 1. Department of Nutrition, Food and Exercise Sciences, School of Biosciences, University of Surrey, Guildford GU2 7XH, UK and 2. School of Agriculture, Policy And Development, University of Reading, Reading RG6 6EU, Reading, UK. Student Competition

Poster Session Four Room: Meeting Room Three Time: 16:00 – 17:30

 16:00 OC123 Application of the Prime Diet Quality Score to the EPIC Food Frequency Questionnaire: baseline data from the Personalising Advice to improve Diet Quality (PAD-Q) trial. M. Ferrari¹, S.F. Brennan¹, T. Grohmann², R. Finlay², A. Courtney², L. Brennan² and J.V. Woodside¹ 1. Centre for Public Health, Institute for Global Food Security, Institute of Clinical Sciences A, Queen's University Belfast, Belfast, UK and 2. UCD Institute of Food and Health, UCD Conway Institute, UCD School of Agriculture and Food Science, University College Dublin, Dublin, Ireland. Student Competition

16:07 OC124 Association between empirically driven dietary patterns and cardiometabolic disease risk factors: A cross-sectional analysis in UK adults. A. Yilmaz¹, M. Weech¹, K.G. Jackson¹ and J.A. Lovegrove¹ 1. Hugh Sinclair Unit of Human Nutrition, Institute of Food, Nutrition and Health and Institute for Cardiovascular and Metabolic Research, Department of Food and Nutritional Science, University of Reading, Reading, RG6 6DZ, UK.
 Student Competition

- 16:14 OC125 Gender-specific effects of 3-month nutrition intervention on lipid profiles and insulin sensitivity. N. Samiilenko¹, K. Mazanko¹, H.Bielokoz¹, S. Shpak¹, O. Zinchenko¹, Y. Muzyra¹, D. Zubach¹, O. Aleksieieva¹, D. Tsomko¹ and O. Bocharova¹ 1. LLC Samoilenco Clinic, Kyiv, Ukraine.
- 16:21 OC126 Association of sarcopenic obesity with multimorbidity: crosssectional study of UK Biobank cohort. M. Guerrero-Wyss¹, A Alsowail¹, F Ho², B. Jani², S. Grey¹, C Celis-Morales¹. 1. School of Cardiovascular and Metabolic Health, University of Glasgow, Glasgow, UK. 2. School of Health and Wellbeing, University of Glasgow, Glasgow, UK. Student Competition

16:28 OC127 Association between predicted hsCRP score and hyperlipidemia among women: the Korea Nurses' Health study. Soomin Lee¹, Chiyoung Cha², Jung Eun Lee^{1,3*} 1. Department of Food and Nutrition, College of Human Ecology, Seoul National University, Seoul, Republic of Korea and 2. College of Nursing, Ewha Womans University, Seoul, Republic of Korea and 3. Research Institute of Human Ecology, Seoul National University, Seoul, Republic of Korea. Student Competition

16:35 OC128 Blood pressure by age group in type 2 diabetics mellitus users of primary health care centres in Copiapó (Chile): a cross-sectional study. J Rojas¹, JC. Fernández-Cao¹, C. Doepking¹, C Aguirre², G. Fernández³, D. Trigo⁴, K. Cremer³, G. Vergara³, N. Varas³, C. Cuadra³, V. Garrido³, M Quinteros³ and C Rojas² 1. Department of Nutrition and Dietetics, Faculty of Health Sciences, University of Atacama, Copiapó, Chile and 2. CODIACO Study, University of Atacama, Copiapó, Chile and 3. Bachelor's Degree in Nutrition and Dietetics, Faculty of Health Sciences, University of Atacama, Copiapó, Chile and 4. Bachelor's Degree in Kinesiology, Faculty of Health Sciences, University of Atacama, Copiapó, Chile.

16:42 **OC129** Investigating the postprandial metabolic and inflammatory phenotypes of healthy subjects and patients with metabolic dysfunction-associated steatotic liver disease and metabolicdysfunction associated steatohepatitis to understand disease progression. Sinéad M. Mullin¹, Christopher E. Shannon², Méabh B. Ní Chathail¹, Pamla Singh³, Suzanne Norris³ and Helen M. Roche⁴ 1. Nutrigenomics Research Group, UCD Conway Institute, Institute of Food and Health and School of Public Health, Physiotherapy and Sports Science, University College Dublin and 2. Nutrigenomics Research Group, UCD Conway Institute, and School of Medicine, University College Dublin and 3. Hepatology Department, St James's Hospital, Dublin and 4. Nutrigenomics Research Group, UCD Conway Institute, Institute of Food & Health, School of Public Health, Physiotherapy & Sports Science, University College Dublin, and Institute for Global Food Security, Queen's University Belfast. **Student Competition**

16:49 OC130 A systematic review of dietary modifications to Mediterranean-style diets. Leigh Chester¹, Fotini Tsofliou¹, Paul Fairbairn¹ and James Brooks¹ 1. Faculty of Health and Social Sciences, Bournemouth University, Dorset BH1 3LT, United Kingdom.
 Student Competition

16:56 OC131 Evaluating Modifiable Hypertension Risk in Nigerian Adults – The Nigerian Diet Risk Score. Nimisoere P. Batubo¹, Carolyn I. Auma¹, J.

Bernadette Moore¹, and Michael A. Zulyniak^{1,2,3} 1. Nutritional Epidemiology Group, School of Food Science and Nutrition, University of Leeds, Leeds, UK and 2. School of Medicine, Faculty of Medicine and Health, University of Leeds, Leeds, UK and 3. Food, Nutrition and Health, University of British Columbia, Vancouver, BC, Canada. **Student Competition**

17:03 OC132 Understanding Searches for 'Weight Loss' Using Google Trends. M. Iqbal^{1,2}, M.A. Morris^{1,3} and J.E. Cade¹ 1. Nutritional Epidemiology Group, School of Food Science and Nutrition, University of Leeds, UK and 2. Politeknik Negeri Jember, Indonesia and 3. Leeds Institute for Data Analytics, University of Leeds.
 Student Competition

17:10 OC133 Low-carbohydrate vs low-fat diets for the secondary prevention of cardiovascular diseases. A meta-analysis. K. Nikitara¹, M. Kontogianni², AB. Haidich³, V. Bountziouka¹1. Computer Simulation, Genomics and Data Analysis Laboratory, Department of Food Science and Nutrition, School of the Environment, University of the Aegean, Lemnos, Greece and 2. Department of Nutrition and Dietetics, School of Health Science and Education, Harokopio University, Athens and 3. Department of Hygiene, Social-Preventive Medicine and Medical Statistics, School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki.

Poster Session Five Room: Meeting Room Four Time: 16:00 – 17:30

16:00 OC134 Pulse-rich diets and risk of cardiovascular diseases: findings from the UK Biobank prospective study. O.A Olotu¹, Y Kaimila^{1,4}, M.E Clegg^{1,2}, K.G Jackson^{1,2,3} and J.A Lovegrove^{1,2,3} 1. Hugh Sinclair Unit of Human Nutrition and 2. Institute of Food, Nutrition and Health and 3. Institute for Cardiovascular Metabolic Research, Harry Nursten Building, Whiteknights, University of Reading, Reading, RG6 6DZ. UK and 4. The University of Malawi, P.O Box 280, Zomba. Malawi.
 Student Competition

16:07 OC135 The cardiovascular implications of low energy availability in physically active females: a systematic review. L Pope¹, D M. Roche¹, Z A. Marshall¹, N Alwan² & R J. Webb¹ 1. School of Health and Sports Sciences, Hope Park Campus, Liverpool Hope University, Liverpool, UK and 2. Department of Sport and Health Sciences, Oxford Brookes University, Oxford, United Kingdom.
 Student Competition

- 16:14 OC136 Consumption of fish and seafood in patients with type 2 diabetes mellitus according to nutritional status in Copiapó (Chile). J. Rojas-Calisto¹, JC. Fernández-Cao¹, C. Doepking¹, MJ. Castro², J. Delgado², V. Cayo², K. Balboa², G. Correa², V. Garrido², C. Cuadra², M. Quinteros², C. Rojas³ and M. Bustos³ 1. Department of Nutrition and Dietetics, Faculty of Health Sciences, University of Atacama, Copiapó, Chile and 2. Bachelor's Degree in Nutrition and Dietetics, Faculty of Health Sciences, University of Atacama, Copiapó, Chile and 3. CODIACO Study, University of Atacama, Copiapó, Chile.
- 16:21 OC137 Overweight prevalence among incarcerated individuals: A systematic review and meta-analysis including data from developed and developing countries. L. Mosomi¹, M. Aceves-Martins¹, A. M. Johnstone¹ and B. de Roos¹ 1. The Rowett Institute, University of Aberdeen, AB25 2ZD, UK. Student Competition
- 16:28 OC138 The experiences of people with Type 2 diabetes (T2DM) who recently induced remission by low-carbohydrate diets (LCDs) in primary care settings. A.N. Aksoy¹, J. Abayomi¹, N. Relph¹ and T. Butler^{1,2} 1. Faculty of Health, Social Care and Medicine, Edge Hill University, St Helen's Road, Ormskirk, United Kingdom, L39 4QP 2Cardiorespiratory Research Centre, Edge Hill University, St Helen's Road, Ormskirk, United Kingdom, L39 4QP. Student Competition

16:35 OC140 Diet quality according to age group of subjects with type 2 diabetes mellitus from primary health care centres in Copiapó (Chile). Fernández-Cao JC¹, Doepking C¹, Rojas Calisto J¹, Aguirre C², Vigorena A², Quinteros M³, Vergara G³, Varas N³, Cuadra C³, Garrido V³, Bustos M² and Rojas C² 1. Department of Nutrition and Dietetics, Faculty of Health Sciences, University of Atacama, Copiapo, Chile and 2. CODIACO Study, University of Atacama, Copiapo, Chile and 3. Bachelor's Degree in Nutrition and Dietetics, Faculty of Health Sciences, University of Atacama, Copiapo, Chile.

16:42 OC141 Food consumption frequency in patients with type 2 diabetes mellitus users from primary health care centres of Copiapo (Chile). Fernández-Cao JC¹, Doepking C¹, Rojas J¹, Cayo V², Barraza A¹, Vigorena A³, Correa G², Cremer K², Aguirre C³ and Rojas C³ 1. Department of Nutrition and Dietetics, Faculty of Health Sciences, University of Atacama, Copiapo, Chile and 2. Bachelor's Degree in Nutrition and Dietetics, Faculty of Health Sciences, University of Atacama, Copiapo, Chile; 3. CODIACO Study, University of Atacama, Copiapo, Chile.

16:49 OC142 Prevalence of non-dipping amongst adults with normal clinic blood pressure. C.A Goland¹, P.M Heavey¹ and G.J Cuskelly¹.1. SHE (Sport, Health and Exercise) Research Group, Department of Sport and Health Sciences, Technological University of the Shannon, Athlone, Ireland. Student Competition

16:56 OC143 Physical activity in users with Type 2 Diabetes in Family Health Centres in Copiapó. Jiménez S¹, Fernández-Cao JC², Miranda-Krause R³, Berrios J⁴, Correa G⁴, Trigo D⁵, Flores J⁵, Vega F⁵, López A⁵ and Rojas C⁶ 1. Department of Kinesiology, Faculty of Health Sciences, University of Atacama, Copiapo, Chile and 2. Department of Nutrition and Dietetics, Faculty of Health Sciences, University of Atacama, Copiapo, Chile and 2. Department of Atacama, Copiapo, Chile and 3. Department of Medicine, Faculty of Medicine, University of Atacama, Copiapo, Chile and 4. Bachelor's Degree in Nutrition and Dietetics, Faculty of Health Sciences, University of Atacama, Copiapo, Chile and 5. Bachelor's Degree in Kinesiology, Faculty of Health Sciences, University of Atacama, Copiapo, Chile and 6. CODIACO Study, University of Atacama, Copiapo, Chile.

17:03 OC144 Characterisation of sedentary lifestyle in patients with Type 2 Diabetes Mellitus in Family Health Centres. Jiménez S¹, Fernández-Cao JC², Doepking C², López A³, Vega F³, Fernández G⁴, Balboa K⁴, Trigo D³, Flores J³ and Bustos M⁵.1. Department of Kinesiology, Faculty of Health Sciences, University of Atacama, Copiapo, Chile and 2. Department of Nutrition and Dietetics, Faculty of Health Sciences, University of Atacama, Copiapo, Chile and 3. Bachelor's Degree in Kinesiology, Faculty of Health Sciences, University of Atacama, Copiapo, Chile and 4. Bachelor's Degree in Nutrition and Dietetics, Faculty of Health Sciences, University of Atacama, Copiapo, Chile and 5. CODIACO Study, University of Atacama, Copiapo, Chile.

17:10 OC145 Prospective association between ultra-processed food consumption and incidence of type II diabetes: the UK Whitehall II cohort study. M.E.Wang¹, C. Llewellyn², M.Kastoulis³ and A.Britton¹ 1. Research Department of Epidemiology and Public health, Institute of Epidemiology and Public Health, University College London, London, UK and 2. Research Department of Behaviour Science and Health, Institute of Epidemiology and Public Health, University College London, London, UK and 3. MRC Unit for Lifelong Health and Ageing, Institute of Cardiovascular Diseases, University College London, UK.

17:17 OC146 Weight Recurrence Trends Among Participants Post Laparoscopic Sleeve Gastrectomy: A 13-Year Single-Centre Retrospective Study in Kuwait. A. Alfailakawi^{1,2}, S. Al-Sabah³, V. Nlebedim¹, J.B. Moore¹ and S. Moore¹ 1. School of Food Science and Nutrition, University of Leeds, Leeds, UK and 2. Food and Nutrition Administration, Ministry of Health, Kuwait City, Kuwait and 3. Faculty of Medicine, Kuwait University, Kuwait City, Kuwait. Student Competition

Poster Session Six Room: Meeting Room Five Time: 16:00 – 17:30

16:00 OC147 Information seeking behaviours of parents engaging with information about complementary feeding in the southwest of England. K, Spurlock¹, Dr Toity Deave¹ and Dr Sally Dowling² 1. School of Health and Social Wellbeing, University of the West of England, Bristol, UK. 2. Bristol Medical School, University of Bristol, Bristol, UK. Student Competition

- 16:07 OC148 Influences on the dietary patterns and eating behaviours of 18–36month-old toddlers in Ireland. Ben Leen Smith¹, Mairead E Kiely^{1,2} and Elaine K McCarthy^{1,2} 1. Cork Centre for Vitamin D and Nutrition Research, School of Food and Nutritional Sciences, University College Cork, Ireland and 2. INFANT Research Centre, University College Cork, Ireland.
 Student Competition
- 16:14 OC149 Comparing compliance of the UK and Kyrgyzstan baby food products with WHO Nutrient and Promotion Profile Model guidelines. C. Bozkir¹, K. Esin^{2,3}, D. Threapleton², H.L. Rippin⁴, K. Wickramasinghe⁴, N. Aidralieva⁵, N. Tilenbaeva⁵, T. Mamyrbaeva⁶, J. Artykbaeva⁶, G. Gumagulova⁶ and J.E. Cade² 1. Nutrition and Dietetic Department, Faculty of Health Sciences, Inonu University, Malatya, Türkiye and 2. Nutritional Epidemiology Group, School of Food Science and Nutrition, University of Leeds, Leeds, UK and 3. Nutrition and Dietetic Department, Faculty of Health Sciences, Tokat Gaziosmanpasa University, Tokat Türkiye and 4. Special Initiative on NCDs and Innovation, WHO Regional Office for Europe, Copenhagen, Denmark and 5. WHO Country Office Kyrgyzstan and 6. Ministry of Health of the Kyrgyz Republic, Bishkek, Kyrgyzstan.
- 16:21 OC150 An examination of factors that influence infant growth in the first weeks of life. F.O'Dwyer¹, B.Murphy¹, M.Ali¹, M.Sanecka¹, S.O'Reilly¹ and A.O'Sullivan¹ 1. UCD Institute of Food & Health, University College Dublin, Belfield, Dublin 4, Ireland. Student Competition
- 16:28 OC151 A parent's perspective of the diagnosis and management of cow's milk allergy in infants in the healthcare setting in Ireland. E. Lynch¹, J.L. O'Neill², M. Gray², K. O'Connor², Z. O'Regan², and S. Wilkinson²
 1. Technological University Dublin, Dublin, Ireland and 2. Danone Nutricia Specialised Nutrition, Dublin, Ireland.
 Student Competition

16:35 OC152 Psychosocial predictors of infant and young child feeding practices among mother-infant dyads in Malawi. T.J. Smith¹, C. Mchazime², P. Makaka², F. Nantongwe², E. Namaheya², A. Kadama², G. Ghillia¹, T. Mazubane³, Z. Goolam Nabi³, M.R. Zieff³, K.A. Donald^{3,4}, E. Mbale^{2*} and M.J. Gladstone^{1*} 1. Department of Women's and Children's Health, Institute of Life Course and Medical Sciences, University of Liverpool, UK and 2. Department of Paediatrics and Child Health, Kamuzu University of Health Sciences, Malawi and 3. Department of Paediatrics and Child Health, University of Cape Town, South Africa and 4. Neuroscience Institute, University of Cape Town, South Africa * Contributed equally to this work.

16:42 OC153 Infant feeding practices: an analysis of sociodemographic characteristics and dietary patterns in early life. K. Dalrymple¹, S. Gallagher¹, A. Flynn², L. Poston³ 1. Department of Nutritional Sciences, School of Life Course Sciences, King's College London, London and 2. School of Population Health, Royal College of Surgeons in Ireland, 3. Department of Women and Children's Health, School of Life Course Sciences, King's College London, London.

- 16:49 OC154 An investigation into the parental attitudes and challenges faced when introducing solid foods to infants in Ireland. A. Goff-Stuart¹, J.L. O'Neill¹, E. Lynch¹, K. O'Connor¹, Z. O'Regan¹ and S. Wilkinson¹ 1. Danone Nutricia Specialised Nutrition, Dublin, Ireland.
- 16:56 OC155 A qualitative study of barriers and facilitators of parental adherence to the Food Safety Authority of Ireland's dietary guidelines for 1-to-5-year-olds. O. Eslami¹, GJ. Cuskelly¹, M. Cantwell¹ and Á. O'Connor¹.
 1. SHE Research Group, Department of Sport & Health Sciences, Faculty of Science and Health, Technological University of the Shannon, Ireland.
- 17:03 OC156 Maternal and infant food insecurity: A qualitative investigation into women's experiences during and after pregnancy in South London. A. Flynn¹, J Marshall², L Davies², Lambeth HDRC³, F. Lavelle², S. Harding⁴ and Z. Bell² 1. Royal College of Surgeons in London, Ireland and 2. King's College London, School of Life Course and Population Sciences, Department of Nutritional Sciences, UK and 3. Lambeth Council Health Determinants Research Collaborative, UK, and 4. King's College London, School of Life Course and Population Sciences, Department of Population Health Sciences, UK.

17:10 OC157 The association between breastfeeding duration and adiposity using waist-to-hip ratio and mid-upper arm circumference in South African children aged between one and five years. N. Khanyile^{1,2}, S. Mclaren¹ and U. Fairbrother² 1. Department of Human Nutrition and Dietetics, School of Human Sciences, London Metropolitan University, London, and 2. Department of Biosciences, School of Human Sciences, London Metropolitan University, London, Student Competition

17:17 OC158 Socioeconomic status, demographic factors and dietary quality of Lifeways study grandparents mapped from the 1948 National Nutrition Survey: associations with growth outcomes in their grandchildren at birth, 5, and 10 years. A Mullen¹, C A Corish¹, A Douglass¹ and C Kelleher¹1. School of Public Health, Physiotherapy and Sports Science, University College Dublin, Dublin 4, Republic of Ireland.

Student Competition

Poster Session Seven Room: Meeting Room Six Time: 16:00 – 17:30

 16:00 OC159 Co-designing a nutritional navigation guide for people with psoriasis: a user-centred design approach. P. Hawkins¹, K. Earl¹, T.G. Tektonidis², and R. Fallaize¹ 1. School of Life and Medical Sciences, University of Hertfordshire, Hatfield, AL10 9AB, UK School of Sport, Nutrition and Allied Health Professions and 2. Oxford Brookes University, Oxford, OX3 0BP, UK.
 Student Competition

16:07 OC160 Is diet quality associated with comorbidity and severity of psoriasis? A cross-sectional analysis of data from UK Biobank. Y. Xu¹, S. Zanesco¹, K.V. Dalrymple¹, T. Maruthappu¹, C.E.M. Griffiths², A. Dregan³, R. Gibson¹, and W.L. Hall¹ 1. Department of Nutritional Sciences, School of Life Course and Population Sciences, Faculty of Life Sciences and Medicine, King's College London, London, UK and 2. Department of Dermatology, King's College Hospital, King's College London, London, UK and 3. Department of Psychological Medicine, Institute of Psychiatry, Psychology and Neuroscience, Faculty of Life Sciences and Medicine, King's College London, London, UK.

16:14 OC161 Associations between diet quality indices and psoriasis severity: results from the Asking People with Psoriasis about Lifestyle and Eating study. Sylvia Zanesco¹, Thiviyani Maruthappu¹, Christopher E.M. Griffiths², Kathryn V. Dalrymple¹, Rachel Gibson¹ and Wendy L. Hall¹ 1. King's College London, School of Life Course and Population Sciences, Department of Nutritional Sciences, London and 2. King's College Hospital, Department of Dermatology, King's College London. Student Competition

16:21 OC162 Associations between macronutrient sources and psoriasis severity in a UK-based population: results from the Asking People with Psoriasis about Lifestyle and Eating study. Sylvia Zanesco¹, Thiviyani Maruthappu¹, Christopher E.M. Griffiths², Kathryn V. Dalrymple¹, Rachel Gibson¹ and Wendy L. Hall¹ 1. King's College London, School of Life Course and Population Sciences, Department of Nutritional Sciences, London and 2. King's College Hospital, Department of Dermatology, King's College London. Student Competition 16:28 OC163 Associations between micronutrient intakes and psoriasis severity: the Asking People with Psoriasis about Lifestyle and Eating crosssectional study. Sylvia Zanesco¹, Thiviyani Maruthappu¹, Christopher E.M. Griffiths², Kathryn V. Dalrymple¹, Rachel Gibson¹ and Wendy L. Hall¹.1. King's College London, School of Life Course and Population Sciences, Department of Nutritional Sciences, London and 2.King's College Hospital, Department of Dermatology, King's College London.
 Student Competition

16:35 **OC164** Dietary flavonoid intakes are associated with lower risk of NAFLD: a UK biobank study. W.Bell¹, A.Jennings¹, A.S. Thompson¹, N.P. Bondonno^{1,4,5}, A.Tresserra-Rimbau^{1,6,7}, T.Kühn^{1,2,3} and A.Cassidy¹ 1. The Institute for Global Food Security, School of Biological Sciences, Queen's University Belfast, Northern Ireland, UK and 2. Department of Nutritional Sciences, University of Vienna, Vienna, Austria and 3. Center for Public Health, Medical University of Vienna, Vienna, Austria and 4. Danish Cancer Institute, Copenhagen, Denmark and 5. Nutrition and Health Innovation Research Institute, School of Medical and Health Sciences, Edith Cowan University, Joondalup, Western Australia, Australia and 6. Department of Nutrition, Food Science and Gastronomy, XIA, School of Pharmacy and Food Sciences, INSA, University of Barcelona, 08921 Barcelona, Spain and 7. Centro de Investigación Biomédica en Red Fisiopatología de la Obesidad y la Nutrición (CIBEROBN), Institute of Health Carlos III, 28029 Madrid, Spain.

Student Competition

16:42 **OC165** Adherence to a healthful plant-based diet and risk of chronic kidney disease among individuals with diabetes: A prospective cohort study. A. S. Thompson¹, A. Tresserra-Rimbau^{1,2,3}, A. Jennings¹, N. P. Bondonno^{1,4,5}, C. J. Candussi^{6,7}, J. K. O'Neill¹, C. Hill⁸, M. Gaggl⁷, A. Cassidy^{1*} and T. Kühn^{1,6,7*} 1. The Institute for Global Food Security. School of Biological Sciences, Queen's University Belfast, Northern Ireland, UK and 2. Department of Nutrition, Food Science and Gastronomy, XIA, School of Pharmacy and Food Sciences, INSA, University of Barcelona, 08921 Barcelona, Spain and 3. Centro de Investigación Biomédica en Red Fisiopatología de la Obesidad y la Nutrición (CIBEROBN), Instituto de Salud Carlos III, 28029 Madrid, Spain and 4. Danish Cancer Institute, Copenhagen, Denmark and 5. Nutrition & Health Innovation Research Institute, School of Medical and Health Sciences, Edith Cowan University, Joondalup, WA, Australia and 6. University of Vienna, Department of Nutritional Sciences, Vienna, Austria and 7. Medical University of Vienna, Center for Public Health, Vienna, Austria and 8. Centre for Public Health, Queen's University Belfast, Belfast, United Kingdom. **Student Competition**

16:49 OC166 Association between carrot intake and cancer risk in a prospective observational study of >85-year-olds does not deviate from other age groups. Charles C Ojobor¹, Antoneta Granic², Gerard M O'Brien¹ and Kirsten Brandt¹.1. Human Nutrition & Exercise Research Centre, Population Health Sciences Institute, Faculty of Medical Sciences, Newcastle University, UK and 2. AGE Research Group, Translational and Clinical Research Institute, Faculty of Medical Sciences, Newcastle University, UK.
 Student Competition

16:56 OC167 Effect of Beta- and Alpha-Carotene Intake on Tumour Formation in the Intestines of APCMin/+ Mice. N. H. Smith¹, C.C. Ojobor¹, L. Huang² and K. Brandt¹ 1. Human Nutrition & Exercise Research Centre, Population Health Sciences Institute, Newcastle University, Newcastle upon Tyne, UK and 2. Immune Metabolism Laboratory, Translational and Clinical Research Institute, Newcastle University, Newcastle upon Tyne, UK. Student Competition

17:03 OC168 The effect of a polyphenol supplement on iron absorption in Thai adults with non-transfusion-dependent thalassaemia: a stable iron isotope study. J. Baumgartner¹, S. Gowachirapant², P. Joompa², K. Paiboonsukwong³ and M. B. Zimmermann⁴ 1. Department of Nutritional Sciences, King's College London and 2. Institute of Nutrition, Mahidol University, Salaya and 3. Thalassemia Research Center, Institute of Molecular Biosciences, Mahidol University and 4. Weatherall Institute of Molecular Medicine, John Radcliffe Hospital, University of Oxford, Oxford, United Kingdom.

17:10 OC169 Exploring the causal link between iron levels and pernicious anaemia: A mendelian randomisation study. Alfie Thain¹, Guillermo Comesaña Cimadevila¹, Kath Hart¹, Marie-Joe Dib² and Kourosh R Ahmadi¹ 1. School of Biosciences and Medicine, University of Surrey, Guildford, UK and 2. Division of Cardiovascular Medicine, Perelman School of Medicine, University of Pennsylvania, Philadelphia.

17:17 OC170 The prevalence of inadequate micronutrient intakes and risk of excessive intakes in adults in Ireland: Findings from the National Adult Nutrition Survey II. L. Kehoe^{1,2}, M. Buffini³, B. McNulty³, J.M. Kearney⁴, A. Flynn² and J. Walton¹1. Department of Biological Sciences, Munster Technological University, Cork, Ireland and 2. School of Food and Nutritional Sciences, University College Cork, Ireland and 3. Institute of Food and Health, University College Dublin, Belfield, Dublin 4, Ireland and 4. School of Biological, Health & Sport Sciences, Technological University Dublin, Ireland.

Poster Session Eight Room: Meeting Room Seven Time: 16:00 – 17:30

16:00 OC171 Associations among dietary intake, gene polymorphisms and adipose fatty acid in TwinsUK study. Xinyu Yan¹, Ricardo Costeira¹, Max Tomlinson¹, Jordana T. Bell¹ and Kerrin S. Small 1. Department of Twin Research and Genetic Epidemiology, King's College London, London SE1 7EH, UK.
 Student Competition

16:07 OC172 Liver circadian genes are modulated by high fat feeding in mice: Investigation of microRNA-mediated mechanisms. X. Tan¹,C.W. Cheng², J.L Thorne¹, Y.Y. Gong¹, J.B. Moore¹ and L. Lichtenstein¹ 1. School of Food Science and Nutrition, University of Leeds, Leeds, UK and 2. School of Medicine, University of Leeds, Leeds, UK. Student Competition

16:14 OC173 Nitrosyl-heme and heme iron intake from processed meats and risk of colorectal cancer in the EPIC-Spain cohort. L. Rizzolo-Brime¹, L. Lujan-Barroso^{1,2}, A. Farran-Codina³, R. Bou⁴, C. Lasheras⁵, P. Amiano^{6,7,8}, A. Aizpurua^{7,8}, M.J. Sánchez^{6,9,10}, E. Molina-Montes^{6,10,11,12}, M. Guevara^{6,13,14}, C. Moreno-Iribas^{6,13,14}, A. Gasque¹³, M.D. Chirlague-López^{6,15,16}, S.M. Colorado-Yohar^{6,15,17}, J.M. Huerta^{6,15}, R. Zamora-Ros^{1,18}, A. Agudo¹ and P. Jakszyn^{1,19} 1. Unit of Nutrition and Cancer, Epidemiology Research Programme, Catalan Institute of Oncology (ICO), Bellvitge Biomedical Research Institute (IDIBELL), 08908 L'Hospitalet de Llobregat, Spain and 2. Department of Public Health, Mental Health and Maternal and Child Health Nursing. Faculty of Nursing. University of Barcelona, Carrer de la Feixa Llarga s/n, 08907, L'Hospitalet de Llobregat, Barcelona, Spain and 3. Department of Nutrition, Food Science and Gastronomy, Faculty of Pharmacy, Institute of Nutrition and Food Safety (INSA-UB), University of Barcelona, Campus de l'Alimentació de Torribera, Av. Prat de la Riba 171, Santa Coloma de Gramenet, E-08921 Barcelona, Spain and 4. Food Safety and Functionality Program, Institute of Agrifood Research and Technology (IRTA), Finca Camps i Armet s/n, 17121-Monells, Girona, Spain and 5. Functional Biology Department, School of Medicine, University of Oviedo, Asturias, Spain and 6.Spanish Consortium for Research on Epidemiology and Public Health (CIBERESP), Instituto de Salud Carlos III, Madrid, Spain and 7. Ministry of Health of the Basque Government, Sub Directorate for Public Health and Addictions of Gipuzkoa, San Sebastian, Spain and 8. BioGipuzkoa (BioDonostia) Health Research Institute, Epidemiology of Chronic and Communicable Diseases Group, San Sebastián, Spain

and 9. Escuela Andaluza de Salud Pública (EASP), 18011 Granada, Spain and 10. Instituto de Investigación Biosanitaria ibs.GRANADA, 18012 Granada, Spain and 11. Department of Nutrition and Food Science, Campus of Cartuja, University of Granada, 18071 Granada, Spain and 12. Institute of Nutrition and Food Technology (INYTA) 'José Mataix', Biomedical Research Centre, University of Granada, 18071 Granada, Spain and 13. Instituto de Salud Pública y Laboral de Navarra, 31003 Pamplona, Spain and 14. Navarra Institute for Health Research (IdiSNA), 31008 Pamplona, Spain ans 15. Department of Epidemiology, Murcia Regional Health Council-IMIB, Murcia, Spain and 16. Social-Health Department, Murcia University, 30008 Murcia, Spain and 17. Research Group on Demography and Health, National Faculty of Public Health, University of Antioquia, Medellín, Colombia and 18. Department of Nutrition, Food Sciences, and Gastronomy, Food Innovation Network (XIA), Institute for Research on Nutrition and Food Safety (INSA), Faculty of Pharmacy and Food Sciences University of Barcelona, Barcelona, Spain and 19. Blanguerna School of Health Sciences, Ramon Llull University, 08022 - Barcelona, Spain. **Student Competition**

- 16:21 OC174 Malnutrition and its Risk Factors in Renal Patients on Dialysis. J. AbiKharma¹, J. ElNakouzi¹, M. Abboud¹, N. Wehbe¹ and M. Bassil^{2*}
 1. Nutrition Program, Department of Natural Sciences, School of Arts & Sciences, Lebanese American University, Beirut, Lebanon and 2. Human Nutrition Department, College of Health Sciences, QU Health, Qatar University, Doha, Qatar.
- 16:28 OC175 Alcohol consumption and risk of rheumatoid arthritis: results from the UK Women's Cohort Study. Y Dong¹, D.C. Greenwood², L.J. Hardie³ and J.E. Cade¹ 1. Nutritional Epidemiology Group, School of Food Science and Nutrition, University of Leeds, Leeds, UK and 2. School of Medicine, University of Leeds, Leeds, UK and 3. Leeds Institute of Cardiovascular and Metabolic Medicine, University of Leeds, Leeds, UK.
- 16:35 OC176 Associations between n-3 index and systemic lupus erythematosus disease activity. Cealan O Henry¹, Emeir M McSorley¹, David J Armstrong^{1,2}, J J Strain¹ and Philip J Allsopp¹ 1. Nutrition Innovation Centre for Food and Health (NICHE), Ulster University, Coleraine BT52 1SA, Ireland 2. Department of Rheumatology, Altnagelvin Area Hospital, Glenshane Road, Londonderry BT47 6SB, Ireland.

16:42 OC177 Associations between maternal fish intake, maternal and cord polyunsaturated fatty acid concentrations and offspring anthropometrics at birth and at 7 and 13 years of age. James E McMullan¹, Alison J. Yeates¹, Philip J. Allsopp¹, Maria S. Mulhern¹, J.J. Strain¹, Edwin van Wijngaarden², Gary J. Myers², Emelyn Shroff³, Conrad F, Shamlaye³ and Emeir M. McSorley¹ 1. Nutrition Innovation Centre for Food and Health (NICHE), Ulster University, Coleraine BT52 1SA, Ireland and 2. School of Medicine and Dentistry, University of Rochester, 601 Elmwood Avenue, Rochester, NY 14642, USA 3. The Ministry of Health, Mahé, Republic of Seychelles.

16:49 OC178 Characterisation of patients diagnosed with pernicious anaemia: A first step towards James Lind Alliance Priority Setting Partnership driven research. A. Thain¹, P. Visser², K. Hart¹ and KR. Ahmadi¹ 1. School of Biosciences and Medicine, University of Surrey, Guildford, UK and 2. The Pernicious Anaemia Society, Bridgend, UK. Student Competition

16:56 OC179 What is the prevalence of vitamin B12 deficiency among healthy vegans and vegetarians of European ancestry residing in Western Europe or the USA? A. Niklewicz¹¥, L Hannibal², M. Warren³ and K. R Ahmadi¹ 1. Department of Nutritional Sciences, Faculty of Health & Medical Sciences, University of Surrey, Guildford and 2. Laboratory of Clinical Biochemistry and Metabolism, Department of General Paediatrics, Adolescent Medicine and Neonatology, Faculty of Medicine, Medical Center, University of Freiburg, Freiburg, Germany and 3. Norwich Research Park, Quadram Institute Bioscience, Norwich, UK ¥ Ali Niklewicz is a PhD student supported by a Doctoral Training Program Studentship from the BBSRC.

17:03 OC180 Assessment of vitamin B12 status among women of childbearing age in the UK following vegan and vegetarian diets: results from the National Diet and Nutrition Survey (NDNS). A. Niklewicz¹¥, L. Hannibal², M. Warren³ and K. R Ahmadi¹ 1. Department of Nutritional Sciences, Faculty of Health & Medical Sciences, University of Surrey, Guildford and 2. Laboratory of Clinical Biochemistry and Metabolism, Department of General Paediatrics, Adolescent Medicine and Neonatology, Faculty of Medicine, Medical Center, University of Freiburg, Freiburg, Germany and 3. Norwich Research Park, Quadram Institute Bioscience, Norwich, UK ¥ Ali Niklewicz is a PhD student supported by a Doctoral Training Program Studentship from the BBSRC.
Student Competition

PROGRAMME DAY TWO

WEDNESDAY 3 JULY

08:00	O Satellite Symposium: Feeding the future: Satellite Symposium: Are dietary exploring roles in food systems recommendations for whole-grain intake		
	transformation	necessary for LIK and Ireland?	
	Hostod by: University College Dublin	Hosted by: Quaker Oats (PopsiCo)	
	Institute of Food and Hoalth	Conference Room	
	Assembly Hall	Comerence noom	
	Assembly hull	The importance of wholegrain intoke in the	
	Food production	diet and challenges with the definition of	
	Professor Tommy Boland University	wholegrain and wholegrain foods	
	College Dublin Ireland	Professor Chris Seal Newcastle University	
	Conege Dubini, neidild	UK	
	Food environment		
	Sinead O'Mahony, University College	Overview of the Danish Whole Grain	
	Dublin and Food Safety Authority of	partnership and how this programme	
	Ireland (FSAI), Ireland	translates to the UK and Ireland	
		Professor Louise Dye, University of Sheffield,	
	Individual behaviour change	UK	
	Dr Aifric O'Sullivan, University College		
	Dublin, Ireland		
	Core Symposium Two	- Nutrition study design	
	Hosted by: The Nutrition Society		
	Asser	nbly Hall	
09.00	Novel study designs analysis approaches in putrition research		
00100	Professor Baukie de Boos. The Bowe	ett Institute. University of Aberdeen. UK	
	· · · · · · · · · · · · · · · · · · ·		
09:30	Nutrition study design - Data inte	gration from multiple assessments	
	Professor Eileen Gibney, Uni	versity College Dublin, Ireland	
10:00	Understanding and applying food	systems to improve dietary health	
	Professor Maria Bryar	nt, University of York, UK	
10:30	Refreshn	nent Break	
	Exhibit	tion Area	

11:00	Silver Me	edal Lecture	
	Hosted by: The Nutrition Society		
	Assembly Hall		
	Co-designing digital solutions to improv	e diets in rural communities: an Australian	
	pers	pective	
	Dr Katherine Livingstone, Institute for Phys	ical Activity and Nutrition, Deakin University,	
	Australia		
12:00	Lunch		
	Exhibition Area		
12:00	Satellite Symposium: Navigating the	Workshop: 'Ideas for Careers'	
	complexity of applying nutrition evidence:	Hosted by: The Nutrition Society Academy	
	Recommendations from the Academy of	Board Room	
	Nutrition Sciences		
	Hosted by: Academy of Nutrition Sciences	Facilitators:	
	Assembly Hall	Academia: Dr Sarah Berry, King's College	
		London, UK	
	Navigating the complexity of applying	Freelance: Penelope Hunking, Freelance	
	nutrition evidence: Recommendations	Dietitian, UK	
	from the Academy of Nutrition Sciences	Industry: Dr Holly Neill, Yakult, UK	
	Professor Christine Williams, Trustee of the	Non-profit: Cassandra Ellis, The Nutrition	
	Academy of Nutrition Sciences, UK	Society, UK	
	Dr Margaret Ashwell, Trustee of the		
	Academy of Nutrition Sciences, UK		
	Professor Kevin Whelan, Irustee of the		
	Academy of Nutrition Sciences, UK		
12:00	Annual Section	n Meeting (ASM)	
	Hosted by: The Nutriti	ion Society Irish Section	
	Confere	nce Room	
	The Nutrition Society welcomes all Irish S	ection Nutrition Society members to join the	
	meeting.		
	UK Postgraduate Competition		
	Hosted by: The	Nutrition Society	
	Assen	nbly Hall	
13:00	Optimising dietary behaviour: can sports n	utrition research contribute to improvements	
	in popula ⁴	tion health?	
	Michèle Renard, King	g's College London, UK	
13:25	Creating sustainable diets	with metabolic phenotyping	
	Katie Davies, Universit	y College Dublin, Ireland	

13:50	Plant-based milk alternatives – can they replace the iodine from cows' milk?
	Katie Nicol, University of Surrey, UK
14:15	Introducing dietary advice as a therapeutic tool to manage psoriasis
	Sylvia Zanesco, King's College London, UK
14:40	British Journal of Nutrition Paper of the Year Lecture
	Hosted by: The Nutrition Society
	Assembly Hall
	Weight trajectories from birth to 5 years and child appetitive traits at 7 years of age: a
	prospective birth conort study
	Dr Sarah Warkentin, institute of Public Health, University of Porto, Portugal
15:30	Refreshment Break
	Exhibition Area
	Core Symposium Three - Monitoring of food data from purchase to intake
	Hosted by: The Nutrition Society
	Assembly Hall
16:00	Capturing food insecurity data and implications for business and policy
	Dr Sinead Furey, Ulster University, UK
16:30	A nation's story with food and body weight – through the eyes of national food
	consumption surveys
	Associate Professor Breige McNulty, University College Dublin, Ireland
17:00	Conflict or Interest? Using consumer purchase data to support food systems
	transformation
	Professor Michelle Morris, University of Leeds, UK
	Nilani Sritharan, Sainsbury's Plc, UK
17:30	Rank Prize Lecture
	Hosted by: The Rank Prize
	Assembly Hall
	Micronutrient deficiency prevention: using the evidence base to inform national,
	regional, and global policy
	Professor Kevin Cashman, University College Cork, Ireland
18:15	Close of Day

PROGRAMME DAY THREE

THURSDAY 4 JULY

08:00	Satellite Symposium: Sustainable, healthy and resilient food systems, a focus on	
	micronutrients	
	Hosted by: Queen's University Belfast - Institute for Global Food Security & Centre for Public Health	
	Assembly hun	
	Pasture-based grazing: does it make a difference to human health?	
	Professor Nigel Scollan, Queen's University Belfast, UK	
	Transforming food systems - the new Co-Centre for Sustainable Food Systems	
	Professor Aedin Cassidy, Queen's University Belfast, UK	
	Professor Eileen Gibney, University College Dublin, Ireland	
	Seaweeds in ruminant nutrition: What are the potential benefits for the	
	environment and human-health?	
	Dr Kayley Barnes, Queen's University Belfast, UK	
	Plant based alternatives, a viable option – just don't forget the micronutrients	
	Dr Claire McEvoy, Queen's University Belfast, UK	
	Core Symposium Four - Considerations of the food system	
	Hosted by: The Nutrition Society	
	Assembly Hall	
09:00		
	Climate change, food systems, nutrition and health	
	Climate change, food systems, nutrition and health Associate Professor Pauline Scheelbeek, London School of Hygiene & Tropical	
	Climate change, food systems, nutrition and health Associate Professor Pauline Scheelbeek, London School of Hygiene & Tropical Medicine, UK	
09:30	Climate change, food systems, nutrition and health Associate Professor Pauline Scheelbeek, London School of Hygiene & Tropical Medicine, UK Sustainable approaches to ruminant production based upon the one health	
09:30	Climate change, food systems, nutrition and health Associate Professor Pauline Scheelbeek, London School of Hygiene & Tropical Medicine, UK Sustainable approaches to ruminant production based upon the one health principles	
09:30	Climate change, food systems, nutrition and health Associate Professor Pauline Scheelbeek, London School of Hygiene & Tropical Medicine, UK Sustainable approaches to ruminant production based upon the one health principles Professor Sharon Huws, Queen's University Belfast, UK	
09:30	Climate change, food systems, nutrition and health Associate Professor Pauline Scheelbeek, London School of Hygiene & Tropical Medicine, UK Sustainable approaches to ruminant production based upon the one health principles Professor Sharon Huws, Queen's University Belfast, UK	
09:30	Climate change, food systems, nutrition and health Associate Professor Pauline Scheelbeek, London School of Hygiene & Tropical Medicine, UK Sustainable approaches to ruminant production based upon the one health principles Professor Sharon Huws, Queen's University Belfast, UK Complex, contradictory, and confusing: exploring consumer dilemmas in	
09:30	Climate change, food systems, nutrition and health Associate Professor Pauline Scheelbeek, London School of Hygiene & Tropical Medicine, UK Sustainable approaches to ruminant production based upon the one health principles Professor Sharon Huws, Queen's University Belfast, UK Complex, contradictory, and confusing: exploring consumer dilemmas in navigating nutrition knowledge	
09:30	Climate change, food systems, nutrition and health Associate Professor Pauline Scheelbeek, London School of Hygiene & Tropical Medicine, UK Sustainable approaches to ruminant production based upon the one health principles Professor Sharon Huws, Queen's University Belfast, UK Complex, contradictory, and confusing: exploring consumer dilemmas in navigating nutrition knowledge Professor Mary McCarthy, University College Cork, Ireland	
09:30	Climate change, food systems, nutrition and health Associate Professor Pauline Scheelbeek, London School of Hygiene & Tropical Medicine, UK Sustainable approaches to ruminant production based upon the one health principles Professor Sharon Huws, Queen's University Belfast, UK Complex, contradictory, and confusing: exploring consumer dilemmas in navigating nutrition knowledge Professor Mary McCarthy, University College Cork, Ireland Refreshment Break	
09:30	Climate change, food systems, nutrition and health Associate Professor Pauline Scheelbeek, London School of Hygiene & Tropical Medicine, UK Sustainable approaches to ruminant production based upon the one health principles Professor Sharon Huws, Queen's University Belfast, UK Complex, contradictory, and confusing: exploring consumer dilemmas in navigating nutrition knowledge Professor Mary McCarthy, University College Cork, Ireland Refreshment Break Exhibition Area	

11:00	Satellite Symposium: The role of diet in gut health Hosted by: Yakult UK and Ireland Assembly Hall The role of diet in gut health	Satellite Symposium: Animal Nutrition textbook launch Hosted by: British Society of Animal Science and The Nutrition Society Board Room	
	Professor Kevin Whelan, King's College London, UK	Alternative protein sources for animal feed Professor Andrew Salter, University of Nottingham, UK	
		Bioactive plants: the case of polyphenol- rich plants for gastrointestinal parasite control in ruminants Dr Spiridoula Athanasiadou, Scotland's Rural College, UK	
		Dietary manipulation of rumen fermentation to reduce enteric methane emissions Dr Paul Smith, Teagasc, Ireland	
12:00	Lunch Exhibition Area		
12:00	Satellite Symposium: Achieving food and nutrition security whilst limiting global warming and enabling healthy diets for all Hosted by: Agriculture & Horticulture Development Board Conference Room	Satellite Symposium: A masterclass in sustainable healthy diets; Education, food service and policy perspectives Hosted by: Nutritics Ltd Assembly Hall	
	Animal and plant source foods and human health – reflections on "too little" and "too much" Professor Alice Stanton, Royal College of Surgeons in Ireland, Ireland	software: Navigating strategies for sustainable, healthy diets and consumer perceptions Dr Laura Kirwan and Frances Douglas, Nutritics Ltd, Ireland	
	'Health- from the ground up' a farmer's perspective <i>Professor John Gilliland, Agriculture and Horticulture Development Board, UK</i>	Sustainable diets in education: upskilling the next generation of nutrition professionals Dr Anne Nugent, Queen's University Belfast, UK	
		Healthy and sustainable diets at scale: perspectives from the food service industry, Dr Caroline Donovan Aramark Ireland, Ireland	

	Nutrition and health impacts of reducing meat and dairy intakes to meet the UK Climate Change Committee recommendations in the Scottish population Professor Geraldine McNeill, The University of Edinburgh, UK	Food reformulation for a healthy and sustainable diet; policy, progress and future directions Dr Oonagh Lyons, Food Safety Authority Ireland, Ireland
13:00	Satellite Symposium	Satellite Symposium
	Hosted by: Nutrition and healthy ageing SIG, The Nutrition Society Conference Room	Hosted by: Phytochemicals and health SIG, The Nutrition Society Assembly Hall
	Food systems mapping for older adults. A	Introduction to the Phytochemicals and
	gap analysis from the Food4Years	Health Special Interest Group
	Ageing Network	Dr Ana Rodriguez - Mateos, King's College
	Professor Lisa Methven, University of	London, UK
	Redding, UK	Dr Charlotte Mills, University of Redaing, UK
	A protein enriched Mediterranean diet to	The importance of flavonoids for health
	combat undernutrition: Findings from the	Professor Aedin Cassidy, Queen's University
	ProMed-Cog intervention study	Belfast, Northern Ireland
	Dr Claire McEvoy, Queen's University	
	Belfast, UK	Interplay between dietary polyphenols and the digestive system
	The challenges and opportunities in	Dr Chris Gill, Ulster University, UK
	developing foods for older adults	
	Professor Alexandra Johnstone, University	
	of Aberdeen, UK	
14:00	Original Communio	cation Session Three
	Room locations are noted	on the session running order
15:00	Refreshr	nent Break
	EXHIBIT	ion Ared
	Plenary L	ecture Two
	Hosted by: The	Nutrition Society
	Assen	nbly Hall
15:30	Animal-source foods for putrition env	ironment, and society: finding a balance
10.00	Dr Stella Nordhaaen. Global Al	lliance for Improved Nutrition. UK

16:30	Satellite Symposium: Balancing the scale:	Satellite Symposium: The role of dairy	
	micronutrient deficiency and protein	foods in the protein transition: does the	
	quality in European diets	food matrix matter?	
	Hosted by: EuroFIR AISBL	Hosted by: European Milk Forum	
	Assembly Hall	Conference Room	
	Opening remarks and introduction	Introduction to the food matrix concept:	
	Dr Siân Astley, EuroFIR AISBL, Belgium	implications for the protein transition	
		Professor Michelle McKinley, Queen's	
	Hidden hunger: addressing micronutrient	University Belfast, UK	
	deficiency in Europe		
	Professor Mairead Kiely, University College	Dairy matrix effects: the case of protein	
	Cork, Ireland	transition and micronutrient bioavailability	
		Professor Ian Givens, University of Reading,	
	Protein quality at the meal level: a	UK	
	cornerstone of wellness		
	Dr Sander Biesbroek, Wageningen	Beyond protein content to optimise	
	University, The Netherlands	musculoskeletal health: interactions in the	
		dairy matrix	
	Panel Discussion: Integrating solutions	Dr Oliver Witard, King's College London, UK	
	into everyday life		
10.00	The Nutrities Or sight Area		
16:30	I ne Nutrition Society And	Autritian Society	
	Hosted by: The	A Poom	
	The Nutrition Society welcomes all Nutr	ition Society members to join the meeting	
	The Nathtion Society welcomes an Nath	nion society members to join the meeting.	
17:30	Close	e of Day	
19:00	Conference Dinner		
	Titanic Belfast		
	If you have not yet registered for the conference dinner, register your interest at the		
	registra	tion desk.	

Oral Session One Room: Assembly Hall Time: 14:00 – 15:00

14:00 OC181 Diversity of plant-based food and beverages consumption in the UK adult population: a cross-sectional analysis of the National Diet and Nutrition Survey Year 9. E. Dimidi¹, A. Creedon¹, M.G. Arulpragasam¹, N. McCall¹, L. Foyle¹ and R. Gibson¹ 1. Department of Nutritional Sciences, King's College London, London, UK.

14:15 OC182 A survey to understand whether an evolution of the Eatwell Guide and use of icons would support protein diversification, particularly more plant-based and fungi-based (non-animal) proteins. L.R. Durrant¹, S Slade², T Haffner² and H.E. Theobald¹ 1. Marlow Foods Ltd, Stokesley, UK 2. MyNutriWeb, London, UK.

14:30 OC183 Spaghetti Bolognese without the mince: analysis of meat in UK meal structures. B.J.J. McCormick¹, D. McBey¹, G.W. Horgan² and J.I. Macdiarmid¹ 1. The Rowett Institute, University of Aberdeen, Aberdeen, UK and 2. BioSS, Aberdeen, UK.

14:45 OC184 Can in-store product placement encourage purchases of side salads? A quasi-experimental study in a UK supermarket setting. V.L. Jenneson¹, F.L. Pontin², A. Fildes³, W.C. Young⁴, M.A. Morris^{1,2}
1. School of Food Science and Nutrition, Faculty of Environment, University of Leeds, UK and 2. Consumer Data Research Centre, School of Geography, Faculty of Environment, University of Leeds, UK and 3. School of Psychology, Faculty of Medicine and Health, University of Leeds, UK and 4. School of Earth and Environment, Faculty of Environment, University of Leeds, UK and 4. School of Earth and Environment, Faculty of Environment, University of Leeds, UK and 4. School of Earth and Environment, Faculty of Environment, University of Leeds, UK.

Oral Session Two Room: Minor Hall Time: 14:00 – 15:00

14:00 OC185 Evaluating the prevalence of high fat sugar salt (HFSS) products and labelling characteristics of foods sold in-store Restricted Areas: A survey in three UK supermarkets following the 2022 implementation of The Food (Promotion and Placement) Regulations. E. Hurst¹, S. Moore¹ and L. Wallis¹ 1. School of Food Science and Nutrition, University of Leeds, Leeds, LS3 9JT, United Kingdom.

14:15 OC186 Subjective feedback from the EatWellUK-2 study: Insights for personalised nutrition apps. Eka Bobokhidze¹, Michelle Weech¹, Rosalind Fallaize^{1,2}, Faustina Hwang³ and Julie Lovegrove¹ 1. Hugh Sinclair Unit of Human Nutrition, Department of Food and Nutritional Sciences, and Institute for Cardiovascular and Metabolic Research, University of Reading, Whiteknights, Reading, UK, RG6 6DZ, UK and 2. School of Life and Medical Sciences, University of Hertfordshire, Hatfield, UK, AL10 9AB, UK and 3. Biomedical Engineering Section, School of Biological Sciences, University of Reading, Whiteknights, Reading, Whiteknights, Reading, RG6 6DH, UK.

14:30 OC187 Using fruit and vegetable intakes to illustrate the impacts of personalised nutrition feedback: Results from the MyPlanetDiet RCT. K.P Davies¹, E.R. Gibney¹ and A.M. O'Sullivan¹ 1. Institute of Food and Health, School of Agriculture and Food Science, University College Dublin, Dublin, Ireland. Student Competition

 14:45 OC188 Development of an index to assess adherence to the Traditional Chinese Dietary pattern - a modified Delphi study. J. Niu¹, B. Li¹, and A. Papadaki¹ 1. Centre for Exercise, Nutrition and Health Sciences, School for Policy Studies, University of Bristol, Bristol, UK. Student Competition

Oral Session Three Room: Conference Room Time: 14:00 – 15:00

14:00 OC189 Understanding current discourses on food poverty on the island of Ireland. C. Kerins¹, C. Kelly¹, S. Furey², P. Kerrigan³, A. McCartan⁴ and E. Vaughan¹ 1. Health Promotion Research Centre, School of Health Sciences, University of Galway, Galway, Ireland and 2. Department of Hospitality and Tourism Management, Ulster University Business School, Ulster University, Coleraine, Co. Londonderry, UK and 3. School of Information and Communication Studies, University College Dublin, Dublin 4, Ireland and 4. School of Communication and Media, Ulster University, Belfast, Co. Antrim, UK.

14:15 OC190 Modified diet adherence to nutrition standards in long-term care facilities. E Deasy^{1*}, H. Sheedy^{1*} and G. Kent^{1,2} *equal contributions 1. School of Food and Nutritional Sciences, University College Cork, Cork, Ireland and 2. School of Population Health, Royal College of Surgeons in Ireland, Dublin, Ireland.

14:30 OC191 Culinary nutrition in the United Kingdom: nationwide survey of skills, experiences and education needs of students of nutrition and dietetics. M. Renard¹, A. Knight¹, K. Whelan¹, and F. Lavelle¹ 1. Department of Nutritional Sciences, Kings College London, London, UK.

14:45 OC192 Perceptions and attitudes of food frequency questionnaires and technology-based dietary assessment tools: a qualitative study with Turkish research-focused dietitians. M. Guney-Coskun¹, I. Kalkan¹, M. Weech², R. Fallaize^{2,3}, F. Hwang⁴ and J. A. Lovegrove² 1. Department of Nutrition and Dietetics, Institute of Health Sciences, Istanbul Medipol University, Istanbul 34810, Turkey and 2. Hugh Sinclair Unit of Human Nutrition, University of Reading, Whiteknights, Reading, RG6 6DZ, UK and 3. School of Life and Medical Sciences, University of Hertfordshire, AL10 9AB, UK and 4. Biomedical Engineering Section, School of Biological Sciences, University of Reading, Whiteknights, Reading, RG6 6DH, UK.
 Student Competition

Poster Session One Room: Board Room Time: 14:00 – 15:00

14:00 OC193 The implementation and evaluation of a recipe box scheme to help ease the cost-of-living crisis in university students. Bhakta D¹, Aghili A¹, Illingworth S¹, Marsh K¹, Mulrooney H¹, Shu J¹, Wood P¹, Kwan C. Y¹, Ranta R², Nancheva N³, Dawson R⁴ and Dawson N⁴ 1. School of Human Sciences, London Metropolitan University and 2. School of Law, Social and Behavioural Sciences, Faculty of Business and Social Science, Kingston University London and 3. School of Arts, Humanities and Social Sciences, Roehampton University and 4. Voices of Hope, Kingston, London.

14:07 OC194 Community cafés as a response to food insecurity: what is their impact? N. Nancheva¹ and H. Mulrooney^{2,3} 1. School of Arts, Humanities and Social Sciences, Roehampton University and 2. School of Life Sciences, Pharmacy & Chemistry, Kingston University London and 3. School of Human Sciences, London Metropolitan University.

14:14 OC195 Exploring the impact of cost-of-living-crisis on the dietary practices and health impact among immigrant Nigerians in the UK. B. Johnson¹, M. Sharma¹ and B. Ellahi¹ 1. Faculty of Health, Medicine, and Society. University of Chester, UK. Student Competition

14:21 OC196 Food insecurity, food behaviours, mental wellbeing and diet quality: a nationally representative cross-sectional investigation during the UK cost of living crisis. M. Renard^{1*}, Y. Standish^{1*}, Z. Bell¹, C. Reynolds², C. A Martins^{3,4}A. Flynn^{1,5}, and F. Lavelle¹1. Department of Nutritional Sciences, School of Life Course & Population Sciences, Kings College London, London, UK and 2. Centre for Food Policy, City University, London, UK and 3. Center for Epidemiological Research in Nutrition and Health, University of Sao Paulo, Sao Paulo, Brazil and 4. Institute of Food and Nutrition, Federal University of Rio de Janeiro, Macaé, RJ, Brazil and 5. School of Population Health, Royal College of Surgeons in Ireland, Dublin, Ireland. *Equal Contribution.

14:28	OC197	Building community and offering food support to university students: the KingsGate Student Pantry. S. Sumpter ¹ , S. Clay ² , P. Harper ³ , S. Schwikkard ¹ and H. Mulrooney ^{1,4.} 1. School of Life Sciences, Pharmacy & Chemistry, Kingston University London and 2. Voices of Hope, Kingston and 3. KingsGate Church, Kingston and 4. School of Human Sciences, London Metropolitan University.
14:35	OC198	Exploring food insecurity and sustainable food in rural India: collaborative learning through student mobility programme. <i>R.K.</i> <i>Vijayakumaran</i> ¹ , <i>G. Gayathri</i> ² , <i>R. Lakshmi</i> ² and <i>J. Shiney</i> ² , Juliette <i>Truman</i> ¹ and Carol Clark ¹ 1. Department of Rehabilitation and Sport Sciences, Bournemouth University, Bournemouth, UK and 2. Department of Clinical Nutrition, Faculty of Allied Health Sciences, Sri Ramachandra Institute of Higher Education & Research.
14:42	OC199	Food growing: building community and food resilience. <i>N.</i> Nancheva ¹ and H. Mulrooney ^{2,3} 1. School of Arts, Humanities and Social Sciences, Roehampton University and 2. School of Life Sciences, Pharmacy & Chemistry, Kingston University London and 3. School of Human Sciences, London Metropolitan University.
14:49	OC200	Building belonging: the role of community cafés. S. Sumpter ¹ , N. Nancheva ² , R. Ranta ³ , D. Bhakta ⁴ , and H. Mulrooney ^{1,4} 1. School of Life Sciences, Pharmacy & Chemistry, Kingston University London and 2. School of Arts, Humanities and Social Sciences, Roehampton University and 3. School of Law, Social and Behavioural Sciences, Faculty of Business and Social Science, Kingston University London and 4. School of Human Sciences, London Metropolitan University.

Poster Session Two Room: Meeting Room One Time: 14:00 – 15:00

14:00 OC201 Application of a New Definition of Sarcopenic Obesity in Middle-Aged and Older Adults and Association with Cognitive Function: Findings from the National Health and Nutrition Examination Survey 1999-2002. Uraiporn Booranasuksakul^{1*}, Kostas Tsintzas¹, Ian Macdonald¹, Blossom CM Stephan^{2,3,4,} Mario Siervo^{4,5,6.} 1. MRC Versus Arthritis Centre for Musculoskeletal Ageing Research, School of Life Sciences, The University of Nottingham Medical School, Queen's Medical Centre, Nottingham, NG7 2UH, UK and 2. Institute of Mental Health, The University of Nottingham Medical School, Nottingham, UK and 3. Curtin enAble Institute, Faculty of Health Sciences, Curtin University, Kent Street, Bentley, WA, Australia and 4. Dementia Centre of Excellence, enAble Institute, Faculty of Health Sciences, Curtin University, Kent Street, Bentley, WA, Australia and 5. Curtin School of Population Health, Faculty of Health Sciences, Curtin University, Bentley WA, Australia and 6. Vascular and Metabolic Disorders Group, Curtin Health Innovation Research Institute (CHIRI).

14:07 OC202 Tailoring UK food-based dietary guidelines to older adults' nutritional preferences and needs using diet optimisation modelling. B. Bray¹, F.Vieux², R.Poinsot², M.Clegg^{3&4}, J.Lovegrove³, J.Woodside¹, V. O'Neill¹, A.Kaur⁵ and C.McEvoy¹ 1. Centre for Public Health/The Institute for Global Food Security, Queen's University Belfast, UK and 2. MS-Nutrition, Marseille, France and 3. Hugh Sinclair Unit of Human Nutrition, University of Reading, UK, UCC, School of Food and Nutritional Sciences and 4. University College Cork, Ireland and 5. Nuffield Department of Primary Care Health Sciences, University of Oxford, UK.

14:14 OC203 Provision of a daily high protein and high energy meal: effects on the physical and psychological wellbeing of community-dwelling, malnourished elderly adults. L. Struszczak¹, M. O'Leary¹, B. Metcalf¹, M. Hickson², I. McClelland³, L. Torquati¹, M. Barreto¹ and J. Bowtell¹
1. University of Exeter, Faculty of Health & Life Sciences, St Lukes Campus, Heavitree Road, Exeter, EX1 2LU, UK and 2. University of Plymouth, Faculty of Health, Drake Circus, Plymouth PL4 8AA, UK and 3. Department of Nutrition and Dietetics, Hengrave House, Torbay Hospital, Torquay, TQ2 7AA, UK.

14:21 OC204 Associations between preferred and misaligned eating behaviours with cognitive outcomes in 45-65-year-old adults living in Cyprus: the NUTRICO study. C. A. Demetriou¹, E. Onisiphorou², D. Hileti², C. Kazafanioti², M. Alogakos¹, D. Vardakastani², E. Christofidou², F. Varianos¹, M. Papaioannou², P. Philippou², E. Andreou², C. Giannaki², P. Stavrinou², F. Constantinidou³,⁴ and E. Philippou²,⁵ 1. Department of Primary Care and Population Health, University of Nicosia Medical School, Nicosia, Cyprus and 2. Department of Life Sciences, School of Life and Health Sciences, University of Nicosia, Cyprus and 3. Center for Applied Neuroscience, University of Cyprus, Nicosia, Cyprus and 4. Department of Psychology, University of Cyprus, Nicosia, Cyprus and 5. Department of Nutritional Sciences, King's College London, UK.

14:28 OC205 Associations of eating rate with postprandial glycaemic and insulin responses, gastric emptying, food and energy intake in older adults (aged ≥65 years). D. Zannidi¹, L. Methven¹, J.V. Woodside², G. McKenna², C. G. Forde³, A. Shafat⁴ and M. E. Clegg^{1,5} 1. Department of Food and Nutritional Sciences, University of Reading, Whiteknights, Reading, RG6 6DZ, UK and 2. Centre for Public Health, School of Medicine, Dentistry and Biomedical Sciences, Queen's University Belfast and 3. Sensory Science and Eating Behaviour, Division of Human Nutrition and Health, Wageningen University and Research, Wageningen, the Netherlands and 4. Physiology, School of Medicine, University of Galway, Galway, H91 W5P7, Ireland and 5. School of Food and Nutritional Sciences, University College Cork, Cork, Ireland.

14:35 OC206 Exploration of self-perceived masticatory ability and measured biting force on nutrient intakes in older Thai adults. S. Nitsuwat¹, L. Marshall¹, K. Sranacharoenpong², A. Sarkar¹ and J. Cade¹ 1. School of Food Science and Nutrition, University of Leeds, Leeds, UK and 2. ASEAN Institute for Health Development, Mahidol University, Nakhon Pathom, Thailand. Student Competition

Poster Session Three Room: Meeting Room Two Time: 14:00 – 15:00

14:00 OC207 Dietitians' involvement, confidence and perceptions around processed foods and health: preliminary survey results. V. Moran¹, SG. Moore¹ and P. Ho¹ 1. School of Food Science and Nutrition, University of Leeds, Leeds, UK, LS2 9JT.
 Student Competition

- 14:07 OC208 Digital competency in nutrition education an educator's perspective. S. O'Donovan¹, S. Scully¹, A. Donnellan¹. and L. Ryan¹1. Department of Sport, Exercise and Nutrition, Atlantic Technological University, Galway, Ireland.
 Student Competition
- 14:14 OC209 Assessing nutritional intake of Sensory Panellists during sensory evaluation sessions. L.R. Durrant¹, V.H. Moran², C. Readman¹, S.E. Caton¹, E.G. Howard¹, F. Wardle¹, A. Kapparis¹ and H.E Theobald¹
 1. Marlow Foods Ltd, Stokesley, UK and 2. University of Leeds, Leeds, UK.
 Student Competition
- 14:21 OC210 Views from healthcare and food professionals on which proteins to include within the Eatwell Guide to support diversification. L.R. Durrant¹, S Slade², T Haffner² and H.E. Theobald¹ 1. Marlow Foods Ltd, Stokesley, UK and 2. MyNutriWeb, London, UK.
- 14:28 OC211 UK Dietitians' and Nutritionists' Perceptions of Low-Calorie Sweeteners in Obesity and Type 2 Diabetes Management: A Cross-Sectional Survey. A. Gorbatenko¹ and G. Farhat¹1. Faculty of Health and Education, Manchester Metropolitan University, Manchester, UK.
- 14:35 OC212 Dietetic attitudes and practice towards bolus feeding. L. Reynolds¹, G. Egan², J.L. O'Neill², J. Hovey², and S. Wilkinson² 1. School of Agriculture and Food Science, University College Dublin, Belfield, Dublin 4, Ireland and 2. Danone Nutricia Specialised Nutrition, Block 1 Deansgrange Business Park, Deansgrange, Co. Dublin, Ireland. Student Competition

14:42 OC213 Exploring dietetic attitudes and experience of recommending tube feeds containing real food ingredients to paediatric patients. *E.* Gallagher¹, G. Randles², J. Hovey², J.L.O'Neill² and S. Wilkinson² 1.School of Biological and Health Sciences, Technological University Dublin, Ireland and 2.Danone Nutricia, Dublin, Ireland. Student Competition

Poster Session Four Room: Meeting Room Three Time: 14:00 – 15:00

14:00 OC214 Delivering and evaluating a behaviour change communication training programme for farm advisors. Laura Gribben^{1&3}, Alison Burrell², Aine Regan³, Moira Dean¹1. Institute for Global Food Security, School of Biological Sciences, Queen's University Belfast, Belfast, United Kingdom and 2. Animal Health Ireland, Carrick-on-Shannon, Co. Leitrim, Ireland and 3. Department of Agri-food Business & Spatial Analysis, Teagasc, Athenry, Co. Galway, Ireland. Student Competition

- 14:07 OC215 Impact of food based intergeneration community intervention. F. Tsofliou¹, R. Vijayakumaran¹, A.T Wilson¹ and A.Mills¹1. Department of Rehabilitation and Sport Sciences, Bournemouth University, Bournemouth, BH8 8GP.
- 14:14 OC216 An online pilot study exploring the relationship between diet quality and psycho-behavioural characteristics in gamers and non-gamers. S. Kim¹, H. Ng¹, D. Micallef², S. Legrand¹, L. Brennan², T. Bin Abdur Rakib³, D. Abdulgalimov³, P. Olivier³, E. Foster³ and T.A. McCaffrey¹1. Digital Nutrition Lab, Department of Nutrition, Dietetics and Food, School of Clinical Sciences, Monash University, Clayton, Victoria, Australia and 2. School of Media and Communication, RMIT University, Melbourne, Victoria, Australia and 3. Action Lab, Faculty of Information Technology, Monash University, Clayton, Victoria, Australia.

 14:21 OC217 UK university students' perceptions about the benefits and value of personalised nutrition advice delivered by the web-based eNutri app. E. Kelly¹, M. Weech¹, R. Fallaize^{1,2}, F. Hwang³ and J. A. Lovegrove¹ 1. Hugh Sinclair Unit of Human Nutrition, University of Reading, Whiteknights, Reading, RG6 6DZ, UK and 2. School of Life and Medical Science, University of Hertfordshire, College Lane, Hatfield, AL10 9AB, UK and 3. Biomedical Engineering Section, School of Biological Sciences, University of Reading, Whiteknights, Reading, RG6 6DH, UK. Student Competition

14:28 OC218 Gender differences in dietary behaviours, body mass index, and alcohol consumption patterns amongst first-year undergraduate students: preliminary findings from a multi-campus university in Ireland. K.-M. McCarthy¹, C. O'Neill¹, J. Walton², and A. Bickerdike¹1. Department of Sport, Leisure and Childhood Studies, Munster Technological University, Bishopstown, Cork, Ireland and 2.
Department of Biological Sciences, Munster Technological University, Bishopstown, Cork, Ireland. Student Competition

- 14:35 OC219 Whole Grain Intake in the United Kingdom Remains Unchanged from 2008/9 to 2018/19 and Well Below Recommended Levels. Inga Kutepova, PhD¹, Colin D Rehm PhD², Samara Joy Friend PhD² 1. Life Sciences, PepsiCo R&D, Reading, UK and 2 Life Sciences, PepsiCo R&D, Purchase, NY (USA).
- 14:42 OC220 Nutrition and health claims on fibre; consumer perceptions, understanding and behaviour. E. Tann¹, L. Dye^{2,3}, N. Boyle³, and K. Adolphus⁴ 1. School of Food Science and Nutrition, University of Leeds, Leeds, UK and 2. Institute for Sustainable Food, University of Sheffield, Sheffield, UK and 3. Department of Psychology, University of Sheffield, Sheffield, UK and 4. School of Psychology, University of Leeds, UK.

Student Competition

14:49 OC221 Double burden of malnutrition and the implementation of double duty actions in low- and middle-income countries: A scoping review of health systems policies. J. Johnsen^{1,2}, K. Martyn^{2,3}, A. Hill¹, C. Logue¹ and S. Ray^{1,2} 1. School of Biomedical Sciences, Ulster University, Coleraine UK and 2. NNEdPro Global Institute for Food, Nutrition and Health, Cambridge, UK and 3. School of Sport and Health Sciences, University of Brighton, Brighton, UK. Student Competition

ORIGINAL COMMUNICATIONS SESSION THREE - RUNNING ORDER

Poster Session Five Room: Meeting Room Four Time: 14:00 – 15:00

14:00 OC222 A content and thematic analysis of Welsh school food menu design and healthiness compared to present government guidelines. A.S. Gilmour¹ and R.M. Fairchild¹ 1. Cardiff School of Sciences and Health Sciences, Cardiff Metropolitan University, Llandaff Campus, Cardiff, UK, CF5 2YB.

14:07OC223School children's exposure to outdoor food marketing for ultra-
processed foods. S. Spolander¹, I. loakeimidis¹ 1. Department of
Biosciences and Nutrition, Karolinska Institutet, Stockholm, Sweden.
Student Competition

14:14 OC224 Systematic review of school-based studies for the prevention and management of childhood obesity. L. Billy¹, I. Ioannis¹, G. Alkyoni¹, A. Tim¹ 1. IMPACT research group, The Department of Biosciences and Nutrition, Karolinska Institutet.

14:21 OC225 Hydration, mood, and cognition in primary aged school children in the United Kingdom. CA Roberts¹, K Boak¹, N McCullogh¹, C Haskell-Ramsay², LJ James³, BP Green⁴, GD Tempest¹, C Buce-Martin¹ and PLS Rumbold¹ 1. Department of Sport, Exercise and Rehabilitation at Northumbria University, Newcastle Upon-Tyne, UK and 2. Department of Psychology at Northumbria University, Newcastle Upon-Tyne, UK and 3. School of Sport, Exercise and Health Sciences, Loughborough University, Loughborough, UK and 4. Medical Nutrition Manager - Innovation R&D at Aymes, UK.
 Student Competition

14:28 OC226 Exploring the food and drink purchases of secondary school pupils in England across the school day. S. Spence¹ and J. Bradley¹ 1. Human Nutrition and Exercise Research Centre, Population Health Sciences Institute, Newcastle University, UK. 14:35 OC227 The effects of Project DAIRE, a school-based food intervention study, on diet diversity, diet quality and health attitudes of children in Northern Ireland. D. Olgacher¹, C. Wallace¹, S. F. Brennan^{1,2}, F. Lavelle², S. E. Moore^{1,2}, M. Dean², M. C. McKinley^{1,2}, P. McCole³, R. F. Hunter¹, L. Dunne⁴, N. E. O'Connell², C. R. Cardwell¹, C. T. Elliot², D. McCarthy², and J. V. Woodside^{1,2} 1. Centre for Public Health, Queen's University Belfast, Belfast, UK and 2. Institute for Global Food Security, Queen's University, Maynooth, Co. Kildare, Ireland and 4. Centre for Evidence and Social Innovation, Queen's University Belfast, Belfast, BK. Student Competition

- 14:42 OC228 Exploring the perception of whole grain foods in school meals: insights from Egyptian primary school. H. Hegazy¹, A. Shanab¹, A. Ahmed² and S. Salama¹ 1. EFB Labs Department, Egyptian Food Bank, Cairo, Egypt and 2. M&E Department, Egyptian Food Bank, Cairo, Egypt.
- 14:49 OC229 Exploring the school environment in relation to healthy eating and physical activity in female high schools in Saudi Arabia. Sarah Aldukair, Prof. Jayne V. Woodside, Dr. Laura McGowan¹ and Prof. Khalid Almutairi². 1. Centre for Public Health, School of Medicine, Dentistry and Biomedical Sciences, Queen's University Belfast, Belfast, UK and 2. Department of Community Health Sciences, College of Applied Medical Sciences, King Saud University, Riyadh, Saudi Arabia.
 Student Competition

ORIGINAL COMMUNICATIONS SESSION THREE - RUNNING ORDER

Poster Session Six Room: Meeting Room Five Time: 14:00 – 15:00

14:00 OC230 Enhancing dietary assessment in Nigeria using myfood24: a pilot study of diets among Nigerian adults. C.A. Uzokwe^{1,2}, C.C. Nkwoala², B.E. Ebenso³, C.G. Opara² and J.E. Cade¹ 1. Nutritional Epidemiology Group, School of Food Science and Nutrition, University of Leeds, UK and 2. Department of Human Nutrition and Dietetics, Michael Okpara University of Agriculture Umudike, Abia State, Nigeria and 3. Leeds Institute of Health Sciences, School of Medicine, University of Leeds, UK.

Student Competition

- 14:07 OC231 Collecting regional data for public health focusing on diet and sustainability measures using myfood24. Cade, J.E.^{1,2}, Rycroft, C.¹, Beer, S.², and Corrigan, N³. 1. Nutritional Epidemiology Group. School of Food Science and Nutrition, University of Leeds, UK and 2. Dietary Assessment Ltd, Nexus Building, Leeds, UK and 3. Office for Health Improvement and Disparities, Department of Health and Social Care Blenheim House, Leeds, LS1 4PL.
- 14:14 OC232 Sustainability metrics of the UK diet using myfood24. G. Williams¹, A. Hasenböhler¹, A. Hamilton¹, M. Galazoula² and J.E. Cade^{1,2} 1. Dietary Assessment Ltd, Nexus Building, Leeds, UK and 2. Nutritional Epidemiology Group. School of Food Science and Nutrition, University of Leeds, UK.
- 14:21 OC233 Method to develop globally relevant portion sizes for nutrient-dense and discretionary foods. A. L. Eldridge¹, C. Debras¹, E. Kotzakioulafi¹, L-T. Tsai¹, F. Salesse² and E. R. Gibney² 1. Nestlé Institute of Health Sciences, Lausanne, Switzerland and 2. Institute of Food and Health, University College Dublin, Ireland.
- 14:28OC234From Bytes to Bites; Advancing Data Collection Methodologies for
Enhanced Branded Food Insights. L.B. Kirwan¹, E.O'Sullivan¹,
S.Hogan¹, F. Douglas¹ and D'O Kelly¹ 1. Nutritics Ltd, 22C Town centre
mall, Main Street, Swords, Dublin, K67 FY88.

ORIGINAL COMMUNICATIONS SESSION THREE - RUNNING ORDER

Poster Session Seven Room: Meeting Room Six Time: 14:00 – 15:00

14:00 OC235 The relative validity of 24-hour dietary recalls conducted via telephone against a 4-day food record to estimate energy, macronutrient, dietary fibre and salt intakes in a convenience sample of adults in Ireland. H. Al-Sehaim¹, L. Kehoe^{1,2}, B. McNulty³, J.M. Kearney⁴, A. Flynn² and J. Walton¹. 1. Department of Biological Sciences, Munster Technological University, Cork, Ireland and 2. School of Food and Nutritional Sciences, University College Cork, Ireland and 3. Institute of Food and Health, University College Dublin, Belfield, Dublin 4, Ireland and 4. School of Biological, Health & Sport Sciences, Technological University Dublin, Dublin, Ireland. Student Competition

- **14:07** OC236 Estimating the nutrient supply from agriculture in Scotland. B.J.J. McCormick¹ and J.I. Macdiarmid¹ 1. The Rowett Institute, University of Aberdeen, Aberdeen, UK.
- 14:14 OC237 Operationalising dietary acceptability: A systematic review on how acceptability is applied in dietary optimisation models. C.Baungaard¹, M.A. Martins¹, G.W. Horgan¹, D.C. Little², J. Hillier³ and B. de Roos¹ 1. The Rowett Institute, University of Aberdeen, Aberdeen, UK and 2. Institute of Aquaculture, University of Stirling, Stirling, UK and 3. Global Academy of Agriculture and Food Systems, University of Edinburgh, Edinburgh, UK.

14:21 OC238 A global review of methodologies for establishing food intake recommendations in food-based dietary guidelines. Fanny Salesse^{1,2}, Alison L. Eldridge³, Tsz Ning Mak⁴ and Eileen R. Gibney^{1,2} 1. UCD Institute of Food and Health, University College Dublin, Ireland and 2. Insight Centre for Data Analytics, University College Dublin, Dublin, Ireland and 3. Nestle Institute of Health Sciences, Lausanne, Switzerland and 4. Nestle Institute of Health Sciences Singapore Hub, Nestle Research, Singapore.
 Student Competition

14:28 **OC239** Consumption of ultra-processed foods based on the NOVA classification system and association with diet's quality and clinical outcomes in Crohn's disease. A. Karachaliou¹, E. Chari¹, M. Bletsa², G. J. Mantzaris³, M. Tzouvala⁴, E. Zacharopoulou⁴, G. Bamias⁵ and M. D. Kontogianni¹ 1. Department of Nutrition and Dietetics, School of Health Science and Education, Harokopio University, Athens and 2. Department of Nutrition and Dietetics, "Sotiria" Hospital of Athens and 3. Department of Gastroenterology, "Evangelismos-Ophthalmiatreion Athinon-Polykliniki" General Hospital, Athens, Greece and 4. Department of Gastroenterology, General Hospital of Nikaia Piraeus "Agios Panteleimon"-General Hospital Dytikis Attikis "Agia Varvara", Nikaia, Greece and 5. GI-Unit, 3rd Academic Department of Internal Medicine, Sotiria Hospital, Medical School, National and Kapodistrian University of Athens, Athens, Greece.

ORIGINAL COMMUNICATIONS SESSION THREE - RUNNING ORDER

Poster Session Eight Room: Meeting Room Seven Time: 14:00 – 15:00

14:00 OC240 Benchmarking the sugar and caffeine content of carbonated sugar-sweetened beverages and energy drinks on the Irish market in 2023.
 A. McCann¹, C. Dunne¹, G. O'Shaughnessy¹ and S. O'Mahony^{1,2} 1. Food Safety Authority of Ireland, Dublin 1, Republic of Ireland and 2.Institute of Food and Health, University College Dublin, Dublin 4, Republic of Ireland.

14:07 OC241 Under the microscope - A review of the testing of Foods for Specific Groups products available on the Irish market. L. Farrell^{1,2}, N. Clarke¹, S. Nic Sheoin^{1,2}, M.G. Hogan^{1,3}, C. Grimes¹, S. Walsh¹ and C.B. O'Donovan¹ 1. The Food Safety Authority of Ireland, Dublin, Ireland and 2. School of Biological Health & Sports Sciences, Technological University Dublin, Dublin 7, Ireland and 3. School of Agriculture and Food Science, University College Dublin, Dublin 4, Ireland.

14:14 OC242 Salivary redox biomarkers of overweight and obese adults in response to prebiotics intervention. Xiangyu Meng¹, Lijing Ke^{1,2*}, Li Li³ 1. Food Nutrition Sciences Centre, Zhejiang Gongshang University, Hangzhou, Zhejiang 310018, China and 2. School of Food Science and Nutrition, University of Leeds, Leeds, LS2 9JT, UK and 3. Clinical Medicine College, Hangzhou Normal University, Hangzhou, China.

14:21 OC243 Multifunctional hydrogels for the delivery of drugs and nutraceuticals for the treatment of inflammatory bowel disease. A. Murtagh¹, C. Higginbotham and P. Heavey¹ 1. SHE (Sport, Health, and Exercise) Nutrition Research Group, Department of Sport and Health Sciences, Technological University of the Shannon: Midlands, Ireland.

14:28 OC244 An investigation into the palatability of a new glycomacropeptide based protein substitute among a sample of phenylketonuria patients. E. Gallagher¹, G. Randles², J. Hovey², J.L. O'Neill² and S. Wilkinson² 1.School of Biological and Health Sciences, Technological University Dublin, Ireland and 2.Danone Nutricia, Dublin, Ireland. Student Competition

14:35 OC245 Sensory appeal and acceptance of a novel food intervention programme for older adults living with dysphagia. J. Holmes¹, K. Light¹ and J, Andrews² 1. The Faculty of Health and Social Sciences, Bournemouth University, Bournemouth, UK and 2. Dorset County Hospital NHS Foundation Trust, Dorchester, UK. 14:42 OC246 Chemical and biological study on the effect of yoghurt on most common consumed ready meat products. Amnah Mohammed Alsuhaibani¹ 1. Department of Physical Sports Sciences, College of Sports Sciences & Physical Activity, Princess Nourah bint Abdulrahman University, P.O. Box 84428, Riyadh 11671, Saudi Arabia.

14:49 OC247 Development of a novel food frequency questionnaire for the estimation of dietary (poly)phenol intake. Y. Li¹, Y. Xu¹, M. Le Sayec¹, N. N. Zaidani Kamarunzaman¹, R. Gibson¹, and A. Rodriguez-Mateos¹
 1. Department of Nutritional Sciences, School of Life Course and Population Sciences, Faculty of Life Sciences and Medicine, King's College London.
 Student Competition

PROGRAMME DAY FOUR

FRIDAY 5 JULY

09:00	Julie Wallace Award Lecture
	Hosted by: The Nutrition Society
	Assembly Hall
	The role of nutrition in dementia risk reduction: Current evidence and context
	Dr Oliver Shannon, Newcastle University, UK
	Core symposium Five - How food and nutrition data can inform policy
	Hosted by: The Nutrition Society
	Assembly Hall
00-45	Translating data into policy informing decisions, surrout and future nerven estives
09:45	from EESA
	III III EFSA Dr Maria Angetaesiadeu, European Eeed Safety Authority, Italy
	Dr Mana Anastassidaou, European Pood Salety Authonty, hary
10:15	Translating evidence into policy - the Nordic nutrition recommendations
	Professor Maijaliisa Erkkola, University of Helsinki, Finland
10:45	Refreshment Break
	Exhibition Area
	Core symposium Six - Novel approaches in nutrition research from evidence to
	impact
	Hosted by: The Nutrition Society
	Assembly Hall
44.45	Deutliche et an anne et a la banne et ditte et an et ditte
11:15	Participatory approaches in numan nutrition research
	Professor Michelle Mickinley, Queen's University Belfast, Ireland
11.45	Good practices and misconceptions in machine learning in putrition research
	Daniel Kirk Kina's College London UK
12:15	Using citizen science to monitor food intake as we move towards sustainable
	diets and a sustainable food system
	Dr Christian Reynolds, City, University of London, UK
12:45	Plenary Lecture Three
	Hosted by: The Nutrition Society
	Assembly Hall
	National food composition data – capabilities and culpabilities in monitoring
	food intake on an individual and population basis
	Dr Maria Traka, Quadram Institute Bioscience, UK
12.50	Close of Congress
13:50	Close of Congress

CORE SYMPOSIUM SPEAKER PRESENTATION SUMMARIES AND BIOGRAPHIES

*Speaker presentation summaries and biographies are published as submitted.

Global food transformation and SDGs by 2030: challenges for prevention policy and systems change

Dr Tarra Penney, York University, Canada

PRESENTATION SUMMARY

With escalating environmental concerns, population growth, and health challenges, there is an urgent call for a global food system transition: to shift towards sustainable and equitable food production and consumption. We face significant challenges in gathering robust evidence to guide policy that can shape this transition globally. Data gaps, the dynamic nature of food systems, the difficulty in predicting the impacts of interventions due to the interconnectedness of these food systems and siloed governance structures represent a few. This talk will share the challenges that emerged from using multi-disciplinary, multicountry, complexity informed research for disease prevention, and insights to encourage critical discourse among researchers committed to supporting collective action and shared responsibility for the future of our global food system.

BIOGRAPHY

Dr Penney is a population health scientist focused on the prevention of disease at the global level. She is assistant professor of Global Food Systems and Policy, a faculty member of the Dahdaleh Institute for Global Health Research and an Investigator at the Global Strategy Lab at York University.

She completed her Postdoctoral training and PhD in preventive medicine and epidemiology at the MRC Epidemiology Unit, University of Cambridge where she examined the multi-levelled impacts of food systems and national policy on population health. Working with national and international organisations and partners in the Global South, her research utilizes systems thinking, complexity science and multiple methods to generate policy relevant evidence to improve systems and tackle some of our largest global challenges including food insecurity, emergence of zoonoses, anti-microbial resistance and the related consequences of climate change.

Dr. Penney holds over \$2M funding as PI and co-PI for the use of systems thinking in global health research from *CIHR (CAN), NIHR (UK)* and the *WHO*, lead the development of WHO Guidance on the use of systems thinking in disease prevention policy (launch in Sept. 2022) and has collaborated with colleagues at several relevant institutions in the field of global health and systems approaches including *London School of Hygiene and Tropical Medicine and University of Cambridge, UK*.

Data challenges in nutritional epidemiology – intake, patterns or biomarkers – or else? *Professor Edith Feskens, Wageningen University, The Netherlands*

PRESENTATION SUMMARY

Nutritional epidemiology was a new kid on the block in the 1980's, but now? Many papers have been published during the past 40 years, and reported associations on dietary intake and chronic disease risks have found their way in several national food-based dietary guidelines. Being trained in and teaching in nutritional epidemiology myself, I am quite proud of this achievement. But we recently have seen in the discussion of e.g. ultraprocessed foods, the field is also hampered by overinterpretation of data and misuse of questionnaires. I would also argue that we really need to take up this challenge, and improve our toolbox quickly, to avoid further misunderstandings. First and foremost, this relates to proper assessment of (habitual) dietary exposures. However, new developments in data science and AI will help, and during this lecture I want to show current advances in this field, which I hope will be implemented in research practice soon.

BIOGRAPHY

Dr. Edith Feskens is Professor and Chair of Global Nutrition at the Division of Human Nutrition and Health of the Wageningen University, Wageningen, NL. She was trained in nutrition and epidemiology. Her research focuses on healthy and sustainable diets to prevent and combat malnutrition in all its forms; in addition, innovations in dietary assessment are an important theme in her group.

Between 1992 and 2005 she was employed as expert on cardiovascular and diabetes epidemiology by the National Institute of Public Health and the Environment, NL; thereafter she transferred to Wageningen University. She is chair of the expert group Dutch Dietary Guidelines for Diabetes (since 2019) and was a.o. chair of the Scientific Advisory Committee of the Joint Programming initiative Healthy Diet for a Healthy Life (JPI-HDHL, 2019-2023), installed by the Council of Europe.

She is (co)-PI of several larger Dutch and international epidemiological and intervention studies. She has co-authored ~ 630 peer reviewed research articles (h-index 109) and has supervised >60 PhD students towards completion of their theses.

Big data in nutritional epidemiology

Professor Tilman Kühn, University of Vienna, Austria

PRESENTATION SUMMARY

With the advent of omics measurements and more comprehensive examinations even in large-scale population-based studies, nutrition scientists, epidemiologists and statisticians are facing new challenges due to multidimensional data. While omics datasets are often still analysed by traditional statistical approaches, the next wave of big data entering nutritional studies, e.g. from smartphone applications, wearables, or routinely collected data such as electronic health records, and the integration of different complex data sources will necessitate an understanding of bioinformatics methods. It is not surprising that some of the most highly cited papers in the precision nutrition field are based on big data and machine learning (ML) techniques in addition to traditional statistics.

First proof-of-concept studies suggest that individualised dietary recommendations derived from ML algorithms may be superior to classical dietary recommendations, at least regarding a few biomarkers. However, studies under real-world conditions with longer-term follow-up are not available, and adherence to precision nutrition interventions on the population-level is not known. Routine delivery is under debate, given that costs for precision nutrition tools are high. Despite these open questions, precision nutrition trials do show that a combination of big data and agnostic data analysis approaches may lead to interesting novel findings.

While 'unbiased' ML analyses of big data are attractive and may help to overcome fishing for 'significant' findings, selective reporting, and publication bias, their use in populationbased studies is not widespread. This may have to do with the lack of training in the field, but also with specific challenges related to data quality and data protection. Healthcare data is often not standardised, harmonised or complete. Also, assessments of diet and other lifestyle factors are not available from general practice and clinical routine. Thus, compared to areas such as pharmacoepidemiology, routinely collected data alone is often less attractive for research on diet and health, although exceptions may exist for specific areas of clinical nutrition. Truly big data on dietary behaviour and other environmental factors may only become available in the next generation of large-scale studies, if new and better assessment tools can be widely implemented.

So far, it is uncertain whether agnostic analyses of big data would lead to different conclusions on diet and population health. First simpler studies suggest that ML approaches and classical statistics may still lead to similar results. This may change in the future, as ML methods allow to better integrate complex dietary exposures (e.g. circadian rhythms, dietary composition, additives, contaminants etc.). At this point, it appears unlikely that more recent dietary recommendations (e.g. Planetary Health Diet, Nordic Nutrition Recommendations, guidelines by the German Nutrition Society) would have looked dramatically different if they had been based on ML analyses rather than traditional epidemiology. Nevertheless, rapid technological advancements and the utilisation of big data may facilitate progress in unforeseen areas of nutritional epidemiology and public health.

BIOGRAPHY

Tilman is Chair in Public Health Nutrition at the University of Vienna (Department of Nutritional Sciences) and the Medical University of Vienna (Center for Public Health), Austria. He holds a fractional appointment as a Lecturer in Epidemiology and Statistics at Queen's University Belfast (Institute for Global Food Security). Tilman is interested in questions of diet quality, metabolic health and chronic disease risks, and has published more than 250 peer-reviewed papers.

Biomarkers of nutritional exposure and status *Professor Lorraine Brennan, University College Dublin, Ireland*

PRESENTATION SUMMARY

Applications of metabolomics in nutrition research has increased in recent years and can be grouped into one of the following: (1) Identification of dietary biomarkers for single foods or for dietary patterns (2) Applications to dietary intervention studies to help understand metabolic alterations (3) Study of diet-related diseases and (4) Precision Nutrition. With respect to dietary biomarkers and exposure there has been a proliferation of publications in this field: these biomarkers have the potential to act as objective measures of dietary intake thus overcoming some of the key issues with traditional assessment methods. To date, metabolomic profiling has been successful in identifying several putative biomarkers of food exposure. Similarly, use of combination of biomarkers can be employed to study dietary patterns.

Importantly metabolomics can also be used to study the impact of dietary exposure on metabolic pathways. The role of such applications can play an important role in the development of Precision Nutrition. While significant progress has been made to date in the application of metabolomics in nutrition research a number of key challenge remain: addressing these will be key to development of future opportunities.

BIOGRAPHY

Lorraine Brennan a full professor and a PI in the UCD Institute of Food & Health and Conway institute. She is the Vice Principal for Research, Innovation and Impact for the College of Health and Agricultural Sciences. She leads a research group at the forefront of the application of metabolomics in nutrition research and the development of Personalised nutrition. She is an ERC awardee and is currently involved in three European Consortiums-MUSAE, PlantIntake and Promed-cog.

She served as Director of the European Nutrigenomics Organisation for 5 years and led a number of important initiatives such as the development of an Early Career Network and expansion of membership of the organisation. She is a member of the National Academies of Science Engineering and Medicine Standing Committee on Evidence Synthesis and Communications in Diet and Chronic Disease Relationships – advising the US NIH and USDA on future research areas of priority. She was a member of the Food2030 Expert group to advise the European Commission with the development of FOOD2030 and exploring and formulating possible future R&I policy recommendations and actions and assessing their potential impacts. Professor Brennan was co-author of the Policy Document *"Recipe for change : an agenda for a climate-smart and sustainable food system for a healthy Europe: report of the FOOD 2030 expert group"*. Professor Brennan is an Associate Editor for the *American Journal of Clinical Nutrition.*

Novel study designs analysis approaches in nutrition research

Professor Baukje de Roos, The Rowett Institute, University of Aberdeen, UK

PRESENTATION SUMMARY

For decades, randomised controlled trials (RCTs) have been the 'gold standard' approach to show a causal relationship between a dietary intervention and one or more health or disease outcomes. Randomisation of participant characteristics between intervention and control groups reduces bias and confounding that may be associated with an outcome, and it enhances the probability that changes in an outcome can be attributed to the dietary intervention. However, an important drawback of an RCT is that it is almost impossible to control for all endogenous and exogenous confounding factors that are associated with an outcome, such as environment, (epi)genetics, nutritional status, food behaviours, gut microbiota and the metabolome. As a result, we can observe significant variations in response to interventions between individuals. In addition, the strict inclusion and exclusion criteria applied in RCTs may reduce the generalisability of results.

In the past decade, personalised and precision nutrition approaches have firmly established themselves as an innovative way to measure the effectiveness of dietary recommendations to improve individual health status, rather than (or in addition to) population health. The same endogenous and exogenous factors that cause varying individual responses to similar dietary interventions can be exploited to assess, or predict, how individuals respond to dietary interventions. Precision nutrition aims to determine the individual factors that are associated with differences in response to dietary interventions. This is complex, typically needing large studies with hundreds of participants, using advanced statistical approaches and machine-learning algorithms to explain and exploit the inter-individual differences in response to foods, meals and diets.

N-of-1 study designs repeatedly assess the response to one or multiple treatments in the same person, ideally of outcomes that can be measured automatically. Such designs, which are new to nutrition science, offer a powerful approach to assess how an intervention, and/or everyday behaviours, affect individual health outcomes, with repeated measures within individuals, rather than baseline and end measures in a large number of participants, providing the statistical power to determine an individual's responsiveness to intervention. The adoption of new study designs and modelling approaches, including statistical approaches to predict response, and N-of-1 approaches to examine an individuals' response to interventions, will help to make predictions on diet and health outcomes for individuals more effective and accurate in the future.

BIOGRAPHY

Baukje de Roos is an internationally recognised nutrition scientist having >25 years of experience in the design and delivery of human dietary intervention studies to assess how nutrients, foods and diets affect our health. Her current work at the Rowett Institute focusses on developing and implementing novel precision and personalised nutrition approaches to improve population and individual health, as well as finding ways to make our diets more environmentally sustainable. She has worked on identifying the most

important potential food switches in real-time UK diets by modelling relationships between 'healthiness', 'carbon footprint', 'level of processing' and 'cost', work which is now being developed into a 'foodswap' app. She leads the Scottish Government RESAS Strategic Research Programme 2022-2027 Topic "Food & Drink Improvement, and Diet & Food Safety", with interdisciplinary and cross-Institute work focussing on economically profitable and sustainable Scottish food and drink supply chains, and a safe, healthy, nutritious and environmentally sustainable food and drink environment. Baukje's expertise in the area of diet and health has formed the basis of contracts and consultancies with large food companies (Unilever, By-Health, Stephan Nutrition, Cognis, MacPhie of Glenbervie, Provexis, Kelloggs), food levy boards (Seafish), the food and drink support sector (Food and Drink Innovation Service, Scotland Food & Drink), and national UK television (Channel 4's Food Hospital and Superfoods series).

Nutrition study design - Data integration from multiple assessments

Professor Eileen Gibney, University College Dublin, Ireland

PRESENTATION SUMMARY

Nutrition research requires a comprehensive understanding of the interplay between dietary habits and health and lifestyle outcomes, delving into the molecular mechanisms behind these interactions. The integration of data from multiple assessments is of pivotal importance to capture both the complexity and nuances of these relationships and ensure appropriate interpretation of findings. This talk will examine data types used, challenges associated with harmonising data from various sources, and how these have been, or could be, applied in nutrition research. The data integration process involves amalgamating data from diverse sources, including within nutrition research dietary surveys, biomarkers, clinical assessments, and omics technologies. Each assessment modality offers unique perspectives on dietary intake, nutritional status, and metabolic responses, enriching the depth and breadth of research findings. However, the heterogeneity in data formats, measurement scales, and analytical techniques poses challenges. To address these challenges, researchers must employ statistical methods, such as data imputation, standardisation, and normalisation, to reconcile disparities. The development of standardised protocols and metadata frameworks can facilitate data harmonisation across studies, enhancing comparability and reproducibility, but work in the field of nutrition in this area remains lacking. Utilisation of machine learning algorithms and computational tools may support data integration, and can also enable the identification of patterns and associations within integrated datasets, uncovering novel insights into dietary patterns and health outcomes. Despite these advancements, several hurdles persist in the integration of data from multiple assessments in nutrition research. These include data quality issues, privacy concerns, and the need for interdisciplinary collaboration among researchers with diverse expertise. Data integration from multiple assessments in nutrition research holds immense potential. By overcoming methodological challenges and fostering interdisciplinary collaboration, we can harness the power of integrated data to inform evidence-based policy and innovation.

BIOGRAPHY

Eileen Gibney is a Prof of Nutrition at University College Dublin. Her research interests are broad, covering much of the food system. She focuses on the area of personalised nutrition, where she investigates response, including inter-individual variation in response, to nutrition interventions. She develops strategies and innovative technologies for personalised dietary and lifestyle feedback, including supporting the transition to healthy and sustainable diets. She has led several intervention studies examining response to different dairy foods, including alternative and sustainable production systems and consumption patterns. She also considers the food environment examining provision of healthy foods, and delivery of population nutrition guidance. She is/has been a Pl on many national and international projects including; Food4me, Food for Health Ireland, and FNS-Cloud. Most recently Eileen has been appointed as Co-Director for a, 35M Euro Centre for Sustainable and Resilient Food Systems. Eileen is Director of the UCD Institute of Food and Health. She is currently a Trustee of The Nutrition Society.

Understanding and applying food systems to improve dietary health Professor Maria Bryant, University of York, UK

PRESENTATION SUMMARY

In this presentation, Professor Bryant will summarise the role that understanding food systems can play in supporting meaningful and positive change in diet and health. In addition to providing a general, historical perspective on system and food research, this presentation will provide examples of where a systems approach has been used to both support intervention/policy development and to evaluate the impact of its implementation.

BIOGRAPHY

Maria is a Professor of Public Health Nutrition based at the University of York and the Bradford Institute of Health Research. She is a nutritionist with over 20 years' experience in the design and delivery of trials and related methodological research in the field of food, diet and obesity. Her methodological interests include development and evaluation of public health interventions, food systems, food insecurity, early years and school food settings and applied health research. She is passionate about partnership working and is dedicated to ensuring meaningful engagement in all aspects of her work. In addition to being the strategic lead of a portfolio of research focused around public health nutrition within the Department of Health Sciences and the Hull York Medical School, Professor Bryant is the Director of Nutrition Research for Born in Bradford, theme lead for UKPRP ActEarly (Evaluation theme and Food and Healthy weight theme), sub-system lead for Early Years and Schools within UKRI Fix our Food, Academic Director of the BaBi network, the academic lead for Diet and Obesity evaluation for a Better Start Bradford, and the outgoing Chair of the Board of Trustees for the UK Association for the Study of Obesity (ASO).

SILVER MEDAL LECTURE

Co-designing digital solutions to improve diets in rural communities: an Australian perspective

Dr Katherine Livingstone, Institute for Physical Activity and Nutrition, Deakin University, Australia

PRESENTATION SUMMARY

Dietary patterns low in vegetables are a main contributor to the health burden experienced by Australians living in rural communities. Given the ubiquity of smartphones and access to the Internet, digital interventions may offer an accessible delivery model for a dietary intervention in rural communities. However, no digital interventions to address low vegetable intake have been co-designed, tested and evaluated with young adults living in rural areas. Dr Livingstone's research aims to improve the diet and health of young Australian adults via a series of three multidisciplinary projects. Firstly, she has lad the codesign of a digital intervention (Veg4Me) to improve vegetable intake with rural community members and research partners. Active participants in the co-design process were adults \geq 18 years living in three rural Australian communities (total n=57) and research partners (n=4) representing three local rural governments and one peak non-government health organisation. An iterative co-design process was undertaken to understand the needs (predesign phase) and ideas (generative phase) of the target population through eight online workshops and a 21-item online community survey between July and December 2021. Consensus was reached on a concept for a digital intervention that addressed individual and food environment barriers to vegetable intake, specific to rural communities. Implementation recommendations centred on i) food literacy approaches to improve skills via access to vegetable-rich recipes and healthy eating resources, ii) access to personalisation options and behaviour change support, and iii) improving the community food environment by providing information on and access to local food initiatives. Secondly, Dr Livingstone has piloted this intervention in a sample of 116 young adults across rural Australia. The 12-week randomised controlled trial of Veg4Me was conducted between August 2023 and April 2024 (ACTRN12623000179639). Outcome data were collected on feasibility (recruitment, participant, and retention rates), web app engagement, usability and experience, dietary habits and digital equity. Process evaluation interviews were conducted with participants. Preliminary data show that Veg4Me is feasible, engaging and well-liked by young adults in rural areas. Thirdly, Dr Livingstone is designing a type 2 hybrid implementation trial to test the effectiveness, cost effectiveness and implementation potential of Veg4Me. The Veg4Me intervention is anticipated to reduce barriers and support enablers, across individual and community levels, to facilitate higher consumption of vegetables among rural Australians. These outcomes have the potential to contribute to improved wellbeing in the short term and reduced chronic disease risk in the long term, decreasing public health inequities.

BIOGRAPHY

Dr Katherine Livingstone is an NHMRC Emerging Leadership Fellow and senior research fellow at Deakin University's Institute for Physical Activity and Nutrition (IPAN) in Melbourne, Australia. Katherine completed her PhD at the University of Reading in 2013, before working as a Research Associate at Newcastle University and relocating to Australia in 2015. She is a now domain coordinator for IPAN's Food, Nutrition and Health research domain and sits on the Australian Academy of Science National Committee for Nutrition. Katherine leads a research program to improve diets in young adults, with a particular focus on co-designing digital approaches to address diet and health inequities. She has multi-disciplinary expertise in nutritional epidemiology, behavioural nutrition, biochemistry and human interventions.

Optimising dietary behaviour: can sports nutrition research contribute to improvements in population health?

Michèle Renard, King's College London, UK

PRESENTATION SUMMARY

Less than 0.1% of the UK population adhere to all nine national Eat Well Guide recommendations; yet, increased adherence is associated with a 7% (99% CI: 3% to 10%) decrease in total mortality risk⁽¹⁾. Although athletes are often viewed as paragons of health, they also struggle to align their dietary habits with recommended sports nutrition guidelines⁽²⁾. Specifically, team sport athletes frequently fail to meet the energy requirements necessary for their demanding training and competition schedules⁽³⁾. Our own research supports these findings, indicating that team sport athletes typically consume inadequate amounts of carbohydrate ($3.7 - 4.3 \text{ g} \cdot \text{kg} \cdot \text{day}^{-1}$), while their protein (1.4 - 2.0g·kg·day⁻¹) and fat (31.2 - 33.4 % TDEI) intakes often meet or exceed recommendations^(4,5).

Inadequate dietary intake can have far-reaching consequences for athletes, affecting their ability to adapt and recover from intense exercise⁽⁶⁾. Chronic low energy intake relative to exercise energy expenditure can also lead to low energy availability (LEA), which is associated with adverse effects on menstrual, cardiovascular, and musculoskeletal health^(7,8). Importantly, LEA is not confined to elite athletes, with 45% of recreational exercisers previously classified to also be at risk⁽⁹⁾. Additionaly, the lines of distinction between recreational exercisers and athletes are increasingly blurred, highlighting the broader requirement to address these dietary challenges.

Improving dietary intake is imperative for both athletes and the general population. However, initiating positive dietary behaviour change is a complex endeavour due to the multifaceted nature of food choice determinants. Among the factors identified to influence food choices⁽¹⁰⁾, our research has explored nutrition knowledge and cooking/food skills as targets for future behaviour change interventions, due to their potential to be easily modified⁽¹¹⁻¹³⁾.

Our research shows that team sports athletes typically have poor nutrition knowledge scores $(44.3 - 46.0\%)^{(11,12)}$, but higher levels of general education and previous advice from a nutritionist were associated with greater nutrition knowledge $(+3.7-7.5\%, p < 0.05)^{(12)}$. Furthermore, our research also revealed that team sport athletes have lower confidence in their cooking and food skills⁽¹³⁾ when compared to other demographic groups^(14,15). The hierarchical regression models we have produced also explain a substantial amount of the observed variance in cooking (48.8%) and food skills confidence (44%), with gender, general health interest, and food engagement contributing significantly⁽¹³⁾. The trend that male athletes exhibit lower cooking skills confidence⁽¹³⁾ also mirrors observations from the general population⁽¹⁴⁾. This highlights a unique opportunity to enhance the cooking and food skills of athletes, subsequently positioning them as role models for the broader population to emulate⁽¹⁶⁾.

It is important to note that improving dietary behaviour goes beyond addressing singular factors. Upon critical reflection, we recognise that numerous unexplored variables may

influence the translation of knowledge and skills into meaningful dietary improvements. Therefore, intervention design should be informed by a more comprehensive approach, considering wider socio-demographic and psychological variables⁽¹⁷⁾ alongside targeted nutrition education and culinary training. The use of big data and machine learning could offer the technical means to support this⁽¹⁸⁾. We believe the findings of our research among athletes, align with the growing consensus advocating for holistic, systems-based approaches to promote dietary behaviour change for the betterment of population health⁽¹⁹⁾.

 Scheelbeek P, Green R, Papier K, Knuppel A, Alae-Carew C, Balkwill A, et al. Health impacts and environmental footprints of diets that meet the Eatwell Guide recommendations: analyses of multiple UK studies. BMJ Open. 2020 Aug 1;10(8):e037554.
 Thomas DT, Erdman KA, Burke LM. American College of Sports Medicine Joint Position Statement. Nutrition and Athletic Performance. Med Sci Sports Exerc. 2016 Mar;48(3):543–68.

3. Jenner SL, Buckley GL, Belski R, Devlin BL, Forsyth AK. Dietary Intakes of Professional and Semi-Professional Team Sport Athletes Do Not Meet Sport Nutrition Recommendations—A Systematic Literature Review. Nutrients. 2019 May;11(5):1160.

4. Ó Catháin C, Fleming J, Renard M, Kelly DT. Dietary Intake of Gaelic Football Players during Game Preparation and Recovery. Sports. 2020 May 15;8(5):62.

5. Renard M, Kelly DT, Chéilleachair NN, Catháin CÓ. How Does the Dietary Intake of Female Field-Based Team Sport Athletes Compare to Dietary Recommendations for Health and Performance? A Systematic Literature Review. Nutrients. 2021 Apr;13(4):1235.
6. Maughan RJ, Shirreffs SM. Nutrition for sports performance: issues and opportunities. Proc Nutr Soc. 2012 Feb;71(1):112–9.

7. Mountjoy M, Sundgot-Borgen J, Burke L, Ackerman KE, Blauwet C, Constantini N, et al. International Olympic Committee (IOC) Consensus Statement on Relative Energy Deficiency in Sport (RED-S): 2018 Update. Int J Sport Nutr Exerc Metab. 2018 Jul 1;28(4):316–31.

8. Taim BC, Ó Catháin C, Renard M, Elliott-Sale KJ, Madigan S, Ní Chéilleachair N. The Prevalence of Menstrual Cycle Disorders and Menstrual Cycle-Related Symptoms in Female Athletes: A Systematic Literature Review. Sports Med [Internet]. 2023 Jun 30 [cited 2023 Jul 24]; Available from: https://doi.org/10.1007/s40279-023-01871-8

9. Slater J, McLay-Cooke R, Brown R, Black K. Female Recreational Exercisers at Risk for Low Energy Availability. Int J Sport Nutr Exerc Metab. 2016 Oct 1;26(5):421–7.

10. Birkenhead KL, Slater G. A Review of Factors Influencing Athletes' Food Choices. Sports Med Auckl NZ. 2015 Nov;45(11):1511–22.

11. Renard M, Anton-Solanas A, Kelly DT, Ó Catháin C. Evaluation of nutrition knowledge in elite and sub-elite Gaelic football players. Sci Med Footb. 2021 Feb;6(1):82–8.

12. Renard M, Kelly DT, Chéilleachair NN, Catháin CÓ. Evaluation of Nutrition Knowledge in Female Gaelic Games Players. Sports Basel Switz. 2020 Nov 29;8(12):E154.

13. Renard M, Kelly DT, Ní Chéilleachair N, Lavelle F, Ó Catháin C. Cooking and food skills confidence of team sport athletes in Ireland. Nutr Bull. 2023;48(3):329–42.

14. Lavelle F, Bucher T, Dean M, Brown HM, Rollo ME, Collins CE. Diet quality is more strongly related to food skills rather than cooking skills confidence: Results from a national cross-sectional survey. Nutr Diet J Dietit Assoc Aust. 2020 Feb;77(1):112–20.

15. Lavelle F, Mooney E, Coffey S, Lydon R, Dean M, McCloat A. Fun with food - A parentchild community cooking intervention reduces parental fear and increases children's perceived competence. Appetite. 2023 Jan 1;180:106347.

16. Reid H. Athletes as heroes and role models: an ancient model. Sport Ethics Philos. 2017 Jan 2;11(1):40–51.

McGowan L, Pot GK, Stephen AM, Lavelle F, Spence M, Raats M, et al. The influence of socio-demographic, psychological and knowledge-related variables alongside perceived cooking and food skills abilities in the prediction of diet quality in adults: a nationally representative cross-sectional study. Int J Behav Nutr Phys Act. 2016 Oct 26;13(1):111.
 Morgenstern JD, Rosella LC, Costa AP, de Souza RJ, Anderson LN. Perspective: Big Data and Machine Learning Could Help Advance Nutritional Epidemiology. Adv Nutr. 2021 May 1;12(3):621–31.

19. Bennett BJ, Hall KD, Hu FB, McCartney AL, Roberto C. Nutrition and the science of disease prevention: a systems approach to support metabolic health. Ann N Y Acad Sci. 2015 Sep;1352:1–12.

BIOGRAPHY

Michèle Renard is currently a final-year PhD candidate at the Technological University of the Shannon in Ireland and also works as a research assistant for the Department of Nutritional Sciences at King's College London.

He is an interdisciplinary researcher whose work spans the fields of nutrition, behavioural sciences, and exercise physiology, and he readily employs mixed methods approaches to conduct and analyse both quantitative and qualitative research.

His education includes a BSc (Hons) in Exercise, Nutrition, and Health from Kingston University London and an MSc in Applied Sports Nutrition from St Mary's University Twickenham London. Michèle is a registered associate nutritionist with the Association for Nutrition and a graduate registrant of the British Dietetic Association's Sport and Exercise Nutrition Register.

Concurrent to his academic studies, Michèle has worked as a lecturer in sport and exercise nutrition and exercise physiology, a nutritionist and physiologist within the private healthcare sector, and an exercise instructor and sports nutritionist within the commercial fitness industry, as well as a freelance consultant.

Michèle is driven by the profound impact nutrition, exercise, and wider lifestyle modifications can have on preventing and managing various health conditions, and he firmly believes they have a critical role to play for the betterment of population health.

Creating sustainable diets with metabolic phenotyping

Katie Davies, University College Dublin, Ireland

PRESENTATION SUMMARY

Research from the UK and Ireland suggests dietary change at an individual level can reduce food-related environmental impacts to help mitigate global warming and meet climate targets ⁽¹⁻³⁾. More sustainable diets are high in plant-based foods such as whole grains, fruits, vegetables, and plant-based proteins and lower in animal-based foods, which typically have higher environmental impacts ^(4, 5). Diets with lower environmental impact and the components of such, have been linked to better diet quality and metabolic health ^(6, 7). However, the capacity to alter metabolic biomarkers by changing intakes of such components has been inconsistent in dietary interventions ⁽⁸⁻¹¹⁾. This can be attributed to individual factors, such as age, sex, or body composition, influencing how our bodies respond to dietary change. Such factors—along with a range of other nutrition-related genotypes and environmental interactions—create unique metabolic profiles which can be used to explain individualised variation and response to dietary intake ^(12, 13). Understanding inter-individual variation and how individuals respond to dietary change is central to designing sustainable and healthy diets.

Randomised controlled trials report personalised nutrition feedback improves dietary adherence and health indicators when compared to generic, one-size-fits-all healthy eating advice ^(14, 15). Moving towards more sustainable diets will require significant dietary changes in the UK and Ireland ^(3, 16). For example, increasing plant-based protein—whether through traditional sources such as beans and lentils or novel foods such as meat alternatives or cultured meat-will pose new challenges. Vulnerable populations with high micronutrient requirements need special consideration when providing dietary advice if reducing micronutrient-dense, environmentally-impactful foods ^(17, 18). Personalised nutrition can incorporate individual nutrient needs alongside dietary intake and preferences, in addition to targeting specific components of the target diet for that individual ^(19, 20). Researchers can group like individuals based on shared responses or metabolic profiles to better understand and predict the impacts of dietary change ⁽²¹⁾. This type of grouping, called metabolic phenotyping or metabotyping, has previously been used to develop personalised nutrition advice for healthy diets ^(21, 22). One randomised controlled trial found improvements in diet quality and metabolic biomarkers using a metabotype approach ⁽²²⁾. While such an approach has yet to be developed for sustainable diets, it is possible to examine impacts of components of sustainable diets and to identify characteristics that positively respond to such components. Understanding how individuals respond to components of a sustainable diet would allow for researchers to better target dietary advice. This work will aim to understand phenotypic variation that determines response to higher intakes of plant-based proteins, higher intakes of fruits and vegetables and lower intakes of meat and what characteristics are associated with positive physical and metabolic responses.

1. Leydon CL, Leonard UM, McCarthy SN, Harrington JM. Aligning Environmental Sustainability, Health Outcomes, and Affordability in Diet Quality: A Systematic Review. *Adv Nutr*. 2023.

2. Audsley E BM, Chatterton J, Murphy-Bokern D, Webster C, Williams, A. How low can we go? An assessment of greenhouse gas emissions from the UK food system and the scope to reduce them by 2050.; 2009.

3. Macdiarmid JI, Kyle J, Horgan GW, Loe J, Fyfe C, Johnstone A, et al. Sustainable diets for the future: Can we contribute to reducing greenhouse gas emissions by eating a healthy diet? *Am J Clin Nutr.* 2012;96(3):632-9.

4. Sustainable healthy diets: guiding principles. Rome: Food and Agriculture Organization of the United Nations; 2019.

5. Willett W, Rockstrom J, Loken B, Springmann M, Lang T, Vermeulen S, et al. Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems. *Lancet*. 2019;393(10170):447-92.

6. Papier K, Hartman L, Tong TYN, Key TJ, Knuppel A. Higher Meat Intake Is Associated with Higher Inflammatory Markers, Mostly Due to Adiposity: Results from UK Biobank. *J Nutr*. 2022;152(1):183-9.

7. Segovia-Siapco G, Sabaté J. Health and sustainability outcomes of vegetarian dietary patterns: a revisit of the EPIC-Oxford and the Adventist Health Study-2 cohorts. *Eur J Clin Nutr.* 2018;72(S1):60-70.

8. Doma K, olinar KF, Ramdath DD, Wolever TMS, Duncan AM. Canned Beans Decrease Serum Total and LDL Cholesterol in Adults with Elevated LDL Cholesterol in a 4-wk Multicenter, Randomized, Crossover Study. *J Nutr.* 2021;151(12):3701-9.

9. Mollard RC, Luhovyy BL, Panahi S, Nunez M, Hanley A, Anderson GH. Regular consumption of pulses for 8 weeks reduces metabolic syndrome risk factors in overweight and obese adults. *BJN*. 2012;108(S1):S111-S22.

10. Bergeron N, Chiu S, Williams PT, S MK, Krauss RM. Effects of red meat, white meat, and nonmeat protein sources on atherogenic lipoprotein measures in the context of low compared with high saturated fat intake: a randomized controlled trial. *Am J Clin Nutr*. 2019;110(1):24-33.

11. Maki KC, Van Elswyk ME, Alexander DD, Rains TM, Sohn EL, McNeill S. A meta-analysis of randomized controlled trials that compare the lipid effects of beef versus poultry and/or fish consumption. *J Clin Lipidol*. 2012;6(4):352-61.

12. Morris C, O'Grada C, Ryan M, Roche HM, Gibney MJ, Gibney ER, et al. Identification of Differential Responses to an Oral Glucose Tolerance Test in Healthy Adults. *PLOS ONE*. 2013;8(8):e72890.

O'Sullivan A. Metabolic cross-talk between diet and health. *Nat Food*. 2020;1(7):398-9.
 Celis-Morales C, Livingstone KM, Marsaux CF, Macready AL, Fallaize R, O'Donovan CB, et al. Effect of personalized nutrition on health-related behaviour change: evidence from the Food4Me European randomized controlled trial. *Int J Epidemiol*. 2017;46(2):578-88.
 Hoevenaars FPM, Berendsen CMM, Pasman WJ, van den Broek TJ, Barrat E, de Hoogh IM, et al. Evaluation of Food-Intake Behavior in a Healthy Population: Personalized vs. One-

Size-Fits-All. Nutrients. 2020;12(9).

16. Hyland JJ, Henchion M, McCarthy M, McCarthy SN. The climatic impact of food consumption in a representative sample of Irish adults and implications for food and nutrition policy. *Public Health Nutr*. 2017;20(4):726-38.

Leonard UM, Leydon CL, Arranz E, Kiely ME. Impact of consuming an environmentally protective diet on micronutrients: a systematic literature review. *Am J Clin Nutr.* 2024.
 Beal T, Ortenzi F, Fanzo J. Estimated micronutrient shortfalls of the EAT-Lancet planetary health diet. *Lancet Planet Health.* 2023;7(3):e233-e7.

19. Gibney ER. Personalised nutrition – phenotypic and genetic variation in response to dietary intervention. *Proc Nutr Soc.* 2020;79(2):236-45.

20. Davies KP, Gibney ER, O'Sullivan AM. Moving towards more sustainable diets: Is there potential for a personalised approach in practice? *J Hum Nutr Diet*. 2023;n/a(n/a). doi:https://doi.org/10.1111/jhn.13218

21. O'Donovan CB, Walsh MC, Woolhead C, Forster H, Celis-Morales C, Fallaize R, et al. Metabotyping for the development of tailored dietary advice solutions in a European population: the Food4Me study. *BJN*. 2017;118(8):561-9.

22. Hillesheim E, Yin X, Sundaramoorthy GP, Brennan L. Using a Metabotype Framework to Deliver Personalized Nutrition Improves Dietary Quality and Metabolic Health Parameters: A 12-Week Randomized Controlled Trial. *Mol Nutr Food Res.* 2023;67(10):2200620.

BIOGRAPHY

Katie Davies is a Registered Dietitian (RD) with the American Commission on Dietetic Registration and fourth year PhD candidate at University College Dublin (UCD). Katie attended university at Colorado State University in the USA where she received a BSc in Food Science, Human Nutrition and Dietetics and a BA in Spanish language. Katie moved to Dublin in 2018 and completed a Master of Public Health at UCD in which her thesis examined attitudes and awareness of sustainable diets in Ireland. Katie returned to the USA in 2020 to finish her dietetics training at Iowa State University. During her training, she conducted clinical audits for dietetics sites to support sustainable and resilient food systems.

Now working in the UCD Institute of Food and Health, Katie is supervised by Professor Eileen Gibney and Dr Aifric O'Sullivan. During her PhD, Katie has worked as a tutor and gained lecturing experience at undergraduate and postgraduate level as well as providing support for undergraduate research supervision. She serves as an Ambassador for the UCD School of Agriculture and Food Science on a range of promotional activities. Building on the consistent theme through her education and early research career, Katie's PhD research focuses on creating more sustainable diets and examines how changing our dietary intakes play a key role in the mitigation of diet-related chronic disease and climate change. Her PhD examines strategies to support individuals through personalised nutrition feedback to create more sustainable diets.

Plant-based milk alternatives - can they replace the iodine from cows' milk?

Katie Nicol, University of Surrey, UK

PRESENTATION SUMMARY

The shift towards dietary patterns that promote both health and environmental sustainability is a key challenge of our time, given the projected global population growth and the urgent need to address climate change. Reducing the intake of animal-source foods, such as dairy products, and increasing consumption of plant-based foods could help mitigate greenhouse gas emissions ⁽¹⁾. This transition is already evident; over the past 40 years, milk consumption in the UK has decreased ⁽²⁾ and, while cow's milk remains the most popular choice, the popularity of plant-based milk-alternatives (PBMAs) has increased rapidly^{(3).} If PBMAs are to be used to aid in the transition to a more sustainable diet, their addition must not introduce or exacerbate any nutritional inadequacies and the impact of such dietary change needs to be assessed.

PBMAs can be easily substituted in place of cow's milk without modifying meal patterns and food habits, making these products a popular choice for those trying to reduce animal-product consumption. However, PBMAs do not necessarily replace the nutrient value of cow's milk, particularly that of essential micronutrients such as iodine⁽⁴⁾. Cow's milk is the main source of iodine in the UK diet⁽⁵⁾, but in 2020, it was observed that only 20% of the PBMAs in UK grocery stores were fortified with iodine, of which most were fortified at a lower concentration than cow's milk⁽⁴⁾.

While national data suggests that the UK is generally iodine-replete, evidence indicates that some population subgroups such as pregnant women, women of reproductive age and those who are vegan are at risk of iodine inadequacy ⁽⁵⁻⁷⁾. Young women are more likely to be consumers of PBMAs compared to other age groups ^(8, 9) and therefore of public-health concern as iodine deficiency may be exacerbated. Indeed there is evidence that UK consumers of PBMAs had a lower iodine intake and status compared to cow's milk consumers⁽¹⁰⁾. At a population level, the impact of switching from milk to PBMAs is unlikely to be the same for all population groups. Modelling studies, using market data and data from the National Diet and Nutrition Survey, have found that replacing current milk consumption with PBMAs would reduce iodine intake by up to 58% in 1-3 year old children and would increase the proportion of adolescent girls (20% to 48%) and women of reproductive age (13% to 33%) with intakes below the Lower Reference Nutrient Intake (11).

The impact of PBMAs on iodine status and health will depend on how they are incorporated into the diet (i.e. in addition to, or as a partial or total replacement for milk), the type and amount of other sources of iodine in the diet (e.g. seafood, eggs), the consumer's life stage (e.g. pregnancy) and whether the PBMAs are fortified with iodine. This review will examine the literature surrounding PBMAs and iodine intake, with a focus on the implications of widespread switching from cow's milk to PBMAs and highlight potential strategies for improving iodine intake in those choosing PBMAs in place of cow's milk. 1. Pörtner H, Roberts D, Tignor M, Poloczanska E, Mintenbeck K, Alegría A, et al. Climate Change 2022: Impacts, Adaptation and Vulnerability Contribution of Working Group II to the IPCC Sixth Assessment Report

of the Intergovernmental Panel on Climate Change. Cambridge, UK: Cambridge University Press; 2022.

2. Department for Environment FRA. Family Food Survey 2019/20. 2022.

3. Mintel. Dairy and Dairy Alternative Drinks, Milk and Cream - UK. 2022.

4. Nicol K, Thomas E, Nugent A, Woodside J, Hart K, Bath SC. lodine fortification of plantbased dairy and fish alternatives - the effect of substitution on iodine intake based on a market survey in the UK. Br J Nutr. 2022:1-28.

5. Public Health England. NDNS: results from years 9 to 11 (2016 to 2017 and 2018 to 2019) 2020 [Available from: https://www.gov.uk/government/statistics/ndns-results-from-years-9-to-11-2016-to-2017-and-2018-to-2019.

6. Eveleigh ER, Coneyworth LJ, Avery A, Welham SJM. Vegans, Vegetarians, and Omnivores: How Does Dietary Choice Influence Iodine Intake? A Systematic Review. Nutrients. 2020;12(6).

7. Nicol K, Nugent AP, Woodside JV, Hart KH, Bath SC. lodine and plant-based diets: a narrative review and calculation of iodine content. Br J Nutr. 2024;131(2):265-75.

8. Veganuary. Veganuary 2022: Campaign in Review. 2022.

9. Mintel. Added Value in Dairy Drinks, Milk and Cream - UK - April 2019 2019 [Available from: https://academic.mintel.com/display/920710/.

10. Dineva M, Rayman MP, Bath SC. lodine status of consumers of milk-alternative drinks versus cows' milk: data from the UK National Diet and Nutrition Survey. Br J Nutr. 2020;126(1):28-36.

11. Nicol K, Nugent AP, Woodside JV, Hart KH, Bath SC. The impact of replacing milk with plant-based alternatives on iodine intake: a dietary modelling study. European Journal of Nutrition. 2024;63(2):599-611.

BIOGRAPHY

Katie obtained a Bachelor of Science in Sport & Exercise Science in 2016 from the University of Stirling in 2016 and went on to complete a master's degree in Human Nutrition from the University of Glasgow, where she completed her master's thesis on energy expenditure in adults with phenylketonuria. Upon graduation from the University of Glasgow, Katie spent almost three years as a Research Assistant at the University of Glasgow, under the mentorship of Professor Emile Combet working on a variety of topics including iodine status, thyroid function and cardiovascular health.

Keen to expand on her knowledge in nutrition, Katie went on to start her BBSRC funded PhD project at the University of Surrey under the supervision of Dr Sarah Bath and Dr Kath Hart, alongside Professor Jayne Woodside and Dr Anne Nugent at Queen's University, Belfast. Her current research focuses on the impact of transitioning to a plant-based diet on iodine intake and status in the UK population. During her PhD, Katie undertook an internship at the Academy of Medical Sciences in their Grants and Programmes team. She has presented her PhD research at scientific conferences including The Nutrition Society Irish Section Conference, the World Iodine Association international conference in 2022 and The Nutrition Society Summer Conference in 2023.

Introducing dietary advice as a therapeutic tool to manage psoriasis

Sylvia Zanesco, King's College London, UK

PRESENTATION SUMMARY

Psoriasis is a chronic immunoinflammatory skin condition, which frequently co-occurs with cardiometabolic disturbances (Takeshita et al., 2017). Psoriatic onset is hypothesised to be an outcome of a genetic predisposition in the presence of environmental risk factors including stress, smoking, alcohol, physical inactivity, and excess adiposity (Zeng et al., 2017). Poor diet may also be a modifiable risk factor for psoriasis. Understanding the role of diet and lifestyle in treating psoriasis has been identified as the top research priority of the Psoriasis Priority Settings Partnership (Majeed-Ariss et al., 2019).

Research into the role of diet in psoriasis is scarce. One of the few studies that have characterised the diets of people living with psoriasis suggested that individuals modified their diet to improve their skin. Reported modifications included more fruits, vegetables, taking vitamin D supplements, omitting processed and sugary foods, and following special diets such as the gluten-free, low-carbohydrate-high protein and palaeolithic diets (Afifi et al., 2017). Research evaluating dietary strategies for managing psoriasis has predominantly focused on hypocaloric diets and the gluten-free diet, each holding a recommendation by the Medical Board of the National Psoriasis Foundation (USA). A gluten-free diet is recommended for individuals with positive serology for non-celiac gluten sensitivity, and 5-10% weight loss is recommended for individuals living with overweight and obesity (Ford et al., 2018), both of which are applicable to individuals without psoriasis. In the UK, weight-loss is recommended to individuals with psoriasis when receiving methotrexate to prevent treatment-associated risk of liver disease (NICE, 2017).

The evidence base exploring the effect of diet on psoriasis is at an early stage. Observational studies have revealed beneficial associations between time-restricted eating (TRE) and milder psoriasis. These studies however were conducted in the context of Ramadan fasting, opposing the circadian-aligning principles of TRE (Damiani et al., 2019; Adawi et al., 2021). Adherence to the Mediterranean diet (MD) has been inversely associated with psoriasis severity (Barrea et al., 2015; Phan et al., 2018; Molina-Leyva et al., 2019), but these findings were limited to Mediterranean populations and conclusions cannot be drawn due to their cross-sectional study design.

In view of the gaps in the evidence base, the Diet and Psoriasis Project comprises two studies investigating the role of diet in the management of psoriasis (Zanesco et al., 2022). The first is an online cross-sectional study examining associations between diet, sleep, physical activity, alcohol use, and psoriasis severity, in people living with psoriasis in the United Kingdom. The second study investigates the potential for MD and TRE dietary interventions for the management of psoriasis symptoms in volunteers with psoriasis in a feasibility pilot study. This study will collect pilot data on anthropometric, serological, self-assessed psoriasis, and life quality measures and will be the first study to clinically test these diets in individuals with psoriasis. The pilot data will inform the design of a future randomised controlled trial testing the efficacy of the most successful diet. This research

will contribute to the evidence base to derive clinically tested dietary recommendations for individuals with psoriasis.

S.Z. acknowledges PhD studentship funding by the Psoriasis Association.

1. Adawi M, Damiani G, Bragazzi NL et al. (2019) Nutrients 11, 601.

2. Afifi L, Danesh MJ, Lee KM et al. (2017) Dermatol Ther 2, 227-242.

3. Barrea L, Balato N, Di Somma C et al. (2015) J Transl Med 13, 18.

4. Damiani G, Watad A, Bridgewood C et al. (2019) Nutrients 11, 277.

5. Ford AR, Siegel M, Bagel J et al. (2018) JAMA Derm 154, 934-950.

6. Majeed-Ariss R, McPhee M, McAteer H et al. (2019) Br J Derm 181, 871-873.

7. Molina-Leyva A, Cuenca-Barrales C, Vega-Castillo JJ, et al. (2019) Dermatol Ther 32, e12810.

8. National Institute for Health and Care Excellence [NICE]. Psoriasis: assessment and management [Internet]. London: NICE; CG153 [updated 2017 Sep; cited 2024 Mar] Available from: https://www.nice.org.uk/guidance/cg153/resources/psoriasis-assessment-and-management-pdf-35109629621701

9. Phan C, Touvier M, Kesse-Guyot E et al. (2018) JAMA Derm 154, 1017-1024.

10. Takeshita J, Grewal S, Langan SM et al. (2017) JAMA Derm 76, 377-390.

11. Zanesco S, Hall W, Gibson R et al. (2022) Nutr Bull 4, 424-537.

12. Zeng J, Luo S, Huang Y et al. (2017) J Derm 44, 863-872.

BIOGRAPHY

Sylvia is a Registered Associate Nutritionist and third year PhD student at King's College London. Following a dual qualification in Nutrition from the University of Reading (BSc) and later Clinical Nutrition and Disordered Eating (MSc) from the University College London, Sylvia started her career as a Nutritionist at ZOE. Sylvia was a Research Nutritionist on the three PREDICT studies, as well as a Nutrition Coach. Sylvia is currently pursuing a doctoral degree in the Department of Nutritional Sciences at King's College London under the supervision of Prof Wendy Hall, Dr Rachel Gibson, and Dr Thiviyani Maruthappu. The focus of Sylvia's research is on the role of diet in the management of psoriasis for the Diet and Psoriasis Project. As part of this research program, Sylvia is conducting both an observational study and clinical trial examining the effect of diet in managing psoriasis and has authored *Approaches to nutrition intervention in plaque psoriasis, a multi-system inflammatory disease—The Diet and Psoriasis Project (DIEPP)*. Now in her final year, Sylvia will be submitting her PhD thesis in February 2025.

Weight trajectories from birth to 5 years and child appetitive traits at 7 years of age: a prospective birth cohort study

Dr Sarah Warkentin, Institute of Public Health, University of Porto, Portugal

PRESENTATION SUMMARY

The study entitled "Weight trajectories from birth to 5 years and child appetitive traits at 7 years of age: A prospective birth cohort study", aimed to explore the associations between weight trajectories from birth to 5 years and appetitive traits at school-age (7 years). Children participating in an ongoing population-based cohort study were included in this study (n=3855). Four weight trajectories, from birth to 5 years, were investigated: "normal weight gain" (closely overlaps the 50th percentile in the weight-for-age curve), "weight gain during infancy" (low birth weight and weight gain mainly during infancy), "weight gain during childhood" (continuous weight gain since birth) and "persistent weight gain" (always showing higher weight than the average). Appetitive traits were assessed through a parentreported questionnaire (Children's Eating Behavior Questionnaire). Associations were tested using general linear models, adjusted for maternal and child characteristics. Compared with "normal weight gain", those in the other growth trajectories showed greater enjoyment of food and eating in response to food stimuli (i.e., Food Responsiveness), but were less able to compensate for prior food intake and ate faster at 7 years (i.e., less Satiety Responsiveness and Slowness in Eating). Also, those with "weight gain during infancy" showed to have greater Emotional Overeating and less Emotional Undereating and were fussier. Associations were stronger if greater weight gain occurred during infancy. Different mechanisms might explain the association between weight trajectories and appetite, such as fetal programming. Intra-uterine growth restriction may alter food preferences in infancy and adulthood, mainly driven by hedonic eating, and greater preference for sweet tastes and/or high-fat foods. Another possible mechanism is the effect of appetite regulatory hormones, such as leptin. Children born with low weight might develop high leptin levels during catch-up growth, leading to leptin resistance later in life, which leads to a weakened anorexigenic effect of leptin and promotes heightened food approach and lower food avoidant behaviours. Lastly, it is worth mentioning the potential effect of genetic predisposition on appetitive traits. Individuals with greater obesogenic appetitive traits, such as higher food responsiveness and lower satiety responsiveness, are more likely to overeat in situations when high palatable foods are available, thus increasing weight gain. To sum up, early infancy seems to be a sensitive period in the development of later appetitive traits. The control of rapid growth during infancy, besides strategies focused on the overall environment where children are living, are needed. Understanding the lasting effects of early rapid growth could point to new ways of curbing the development of excessive weight and non-communicable diseases in adulthood.

BIOGRAPHY

Sarah Warkentin has a background in Nutrition, and a Masters and PhD in Sciences by the Federal University of São Paulo (UNIFESP) - São Paulo, Brazil. During her PhD, she spent one year at the Johns Hopkins School of Medicine, where she deepened her knowledge on child eating behaviors and parent feeding practices. During her Masters and PhD, she also worked as a university professor in São Paulo (Brazil), lecturing in graduation courses

on Nutrition and Nursing. Sarah then moved to Portugal and started working as a postdoctorate researcher at the Institute of Public Health of the University of Porto (ISPUP) -Porto, Portugal, where she investigated child appetite regulation, obesity and geneenvironment interactions using an ongoing population-based birth cohort.

Currently, she works as a post-doctorate researcher at the Barcelona Institute for Global Health (ISGlobal). At ISGlobal, she investigates the relationship between the urban and the individual exposome, including dietary patterns, on the development of overweight and obesity during adolescence, using a multi-country longitudinal design.

Capturing food insecurity data and implications for business and policy

Dr Sinead Furey, Ulster University, UK

PRESENTATION SUMMARY

Food insecurity (also known as food poverty) is the inability to afford or access a healthy diet (Radimer *et al.*, 1990). It has become a public health emergency (Furey, 2020) and is a priority in the context of the environmental, geopolitical and socio-economic implications on businesses, households and civic society because a poorly nourished population is also less economically productive limiting the business world's chances for maximising economic activity (Beacom *et al.*, 2021). Data about its prevalence are critical for informing cross-sectoral government policy and action to ensure Government cross-departmental understanding and action on hunger and implement strategies for improvement and monitor progress. In order to understand the prevalence and severity of food insecurity, it is incumbent on governments to measure and report on food insecurity at national, regional and global levels. This is important in the context that the UK has signed up to the *Sustainable Development Goals* (United Nations, 2015) that call for an end to poverty (*No poverty*) in all its forms everywhere to end hunger, achieve food security and improved nutrition (*Zero hunger*) (Caraher and Furey, 2018, p.38).

Despite food insecurity achieving growing attention in the food policy arena, efforts to eradicate food poverty thus far have tended to be downstream rather than policy-level responses.

Food insecurity data, whether that be measurement or mapping data can support the targeting of food and economic aid by directing public spending effectively and efficiently. Qualitative data about the lived experience and the efficacy or otherwise of intervention strategies can help to change public attitudes towards the phenomenon and indeed supportive its framing in popular and political debate.

Food insecurity requires a long-term, sustainable solution that addresses the policy issues under focus: low income, under/unemployment, rising food prices and Welfare Reform, informed by routine, Government-supported monitoring and reporting of the extent of food poverty among our citizens.

Importantly however, its measurement should not be considered to be a solution to food insecurity. While measurement is an important and necessary contributor to the research agenda around food insecurity and to plan and inform cross-sectoral government policy and appropriate policy and other interventions, in and of itself it does not provide solutions but contributes importantly to understanding its extent and severity. There, therefore, needs to be a balance between measurement of the problems, devising solutions and evaluating the solutions (Caraher and Furey, 2018, p.7). Critically, we need research and policy solutions that complement each other so that we do not merely continue to describe food poverty occurrences but effect meaningful change amidst our communities to make life better in a timely way for those experiencing acute and chronic hunger. Addressing the structural causes of food insecurity through economically, socially and culturally fair and appropriate policy levers provide the greatest chance to address the gap between income

and food costs and lift our most vulnerable citizens out of food insecurity.

BIOGRAPHY

Dr Sinéad Furey studied Consumer Studies at Ulster University and completed a Doctor of Philosophy degree in food poverty researching the characteristics, extent and location of food deserts in both rural and urban areas of Northern Ireland. She is a Senior lecturer on the Food Business and Innovation undergraduate degree programme in Ulster University Business School, lecturing on food and consumer policy and legislation including active citizenship and sustainability. Her research interests are food policy generally and food insecurity specifically. She led a research team on an investigation of the types of food and drink on price promotion in retail outlets in the Republic of Ireland which was the first island of Ireland research to consider consumers' awareness of, attitudes towards and behaviours around retail food promotions. Her food insecurity research focuses on the definition and measurement of food insecurity and developing an associated risk indicator to map under-served areas with respect to food access and co-existing poverties. She has been working with local councils to co-design food access interventions, including social supermarkets.

Sinéad worked previously as a Senior Consumer Affairs Officer at the Consumer Council for Northern Ireland where she led on food and water policy. In the Education and Training Inspectorate, she worked as a Nutritional Associate to encourage healthy eating policies and practices via a whole-school approach. She worked in the Food Standards Agency in Northern Ireland where she led on food poverty, nutrition surveillance and developing the Dietary Health evidence base in NI.

A nation's story with food and body weight – through the eyes of national food consumption surveys

Associate Professor Breige McNulty, University College Dublin, Ireland

PRESENTATION SUMMARY

What we eat has significant implications for our health, society, and the environment. Nutritionally poor and unhealthy diets can lead to impaired health and increase the risk of non-communicable disease such as obesity and CVD. Additionally, the current food system and people's eating habits negatively impact the environment, contributing to greenhouse gas emissions, deforestation, and biodiversity loss. Addressing these complex challenges requires changes in food production to ensure sustainability and, importantly, changes in consumption to promote healthier and more sustainable diets. Understanding how our dietary habits have evolved over time is crucial, as it can provide valuable insights into food consumption trends and potential drivers, informing policy decisions.

National food consumption surveys are essential policy tools that monitor food consumption at a population level. They serve multiple purposes, such as assessing food safety risks, identifying nutrient inadequacies and developing dietary guidelines. These surveys also offer a valuable opportunity to study changes in dietary patterns and weight status over a lifetime. In Ireland, food consumption surveys have been conducted periodically since 1948 ⁽¹⁾, covering various population groups from preschool children to older adults, with the most recent survey published in 2024 ⁽²⁾.

These surveys provide a unique opportunity to explore the history of food and body weight in our nation, across a seventy five year period. To help us understand the significant changes that have happen in terms of food patterns, nutrient intake and weights status over those years. This presentation will critically examine the dietary habits of the people living in Ireland over this time.

 Department of Health 1948. National Nutrition Survey. Stationery Office, Dublin.
 Irish Universities Nutrition Alliance (IUNA) (2024) National Adult Nutrition Survey II: Summary Report. Available online at www.iuna.net

BIOGRAPHY

Dr Breige McNulty is an Associate Professor in Human Nutrition within the UCD School Agriculture and Food Science and is a part of the UCD Institute of Food and Health. She completed her degree and PhD in Human Nutrition at Ulster University. And over the last 16 years she has co-directed the National food consumption surveys in Ireland. She has extensive experience in area of food consumption and composition, collecting detail dietary and lifestyle data, spanning from preschool children to older adults. She is involved both at a national level (Food Safety Authority or Ireland) and a European level (European Food Safety Authority) with networks related to food consumption data. Her main research interest focuses on the area of food consumption and using such data to gain an understanding of the impact of nutrients, food ingredients and chemicals on health with a
view to underpinning food safety and policy. She has published over 100 papers within this area.

Conflict or Interest? Using consumer purchase data to support food systems transformation

Professor Michelle Morris, University of Leeds, UK Nilani Sritharan, Sainsbury's Plc, UK

PRESENTATION SUMMARY

Food is at the heart of the world's greatest challenges: health, climate change and food insecurity. Encouraging consumers to eat in line with the Eatwell Guide recommendations will deliver benefits for health as well as our planet ⁽¹⁾. It is critical that we find a way to better understand population food behaviours in a scalable and timely manner in order to tackle these wicked problems.

Traditionally research and national surveys have used self-reported dietary consumption records for public health research and policy making. Insights have been used by stakeholders widely, including by industry. However, there are well-documented limitations to this approach, including, but not limited to di erent biases, participant and researcher burden and scale and timeliness. Research and national surveys have additionally used till receipts as an indicator of dietary purchasing patterns, and while this provides a di erent view of food brought into the home it too has limitations shared with self-reported consumption.

Data generated by activities of daily living, such as electronically captured food purchases in supermarket transaction records and by loyalty cards o er an arguably more objective, and at scale, near real-time solution. These data require substantial computation power alongside data science and AI expertise to analyse, in addition to nutrition expertise to interpret meaningfully. These data also allow us to evaluate natural experiments in real world settings, helping to translate the e ectiveness of di erent food environment interventions beyond hypothetical and virtual settings.

The commercially sensitive nature of sales data present data security challenges that dier from personally sensitive data academia is more accustomed to. Trust, secure data infrastructure and collaborative ways of working are essential to unlock the power of such data. A champion on both sides of the collaboration is needed as sharing commercial data is not straightforward or commonplace. With everything aligned we can generate food behavioural insights to use alongside more traditional research to drive food system transformation.

During this talk we will discuss the context in which transaction records have greatest utility using results from the STRIDE validation study comparing sales data with food frequency questionnaires, we will go on to describe cross sectional and longitudinal dietary purchase patterns within a cohort of regular shoppers, before sharing insight derived from sales data on the impact of a variety of instore and online interventions that incentivise fruit and vegetable purchasing. Finally, we will share examples of how business utilise similar data to help drive healthier sales.

Industry and academic perspectives for using these novel data in research, including knotty challenges around nutrition, health and sustainability metrics will be discussed. In order to address biases in sales data, working with multiple retailers is important, but raises challenges with competition law, which we will discuss, alongside an example where this has been overcome.

In conclusion we will share a set of recommendations for consideration for future research using consumer purchase data in research in its broadest sense.

1. Scheelbeek P, Green R, Papier K, et al. Health impacts and environmental footprints of diets that meet the Eatwell Guide recommendations: analyses of multiple UK studies. BMJ Open 2020;10:e037554. doi:10.1136/bmjopen-2020-037554

BIOGRAPHY

Michelle Morris is Professor of Data Science for Food in the School of Food Science and Nutrition at the University of Leeds and a Fellow of the Alan Turing Institute, the UK national institute for data science and artificial intelligence in London. She leads the interdisciplinary Nutrition and Lifestyle Analytics team which uses novel forms of data, including supermarket transaction records from a number of UK supermarkets, for research into lifestyle behaviours and health. She is a Co-Director at the ESRC funded Consumer Data Research Centre, leads the evaluation of the IGD funded Healthy and Sustainable diets programme, and an investigator at the UKRI funded UK Transforming Food Systems grants FIO Food and DIO Food.

BIOGRAPHY

Nilani Sritharan is a qualified Nutritionist with over 20 years' experience leading systems change and better health outcomes for the food industry.

She has previously held roles in nutrition, regulatory and external affairs at Unilever, Nestle and Cereal Partners Worldwide, working in local (UK/EU), regional (Asia/Oceania) and global contexts. Since 2018, Nilani has led a team of nutritionists for Sainsbury's, the UK's second largest food retailer.

Over her career, Nilani has led strategies to deliver long-term product improvements to drive health by stealth, evaluate the impact of food environments on purchasing patterns in real world settings and, most recently, helped to unlock more personalised health insights to incentivise healthier purchases using product and loyalty card data. She also collaborates regularly with the academic community (FIO-FOOD, DIO-FOOD) and other food system actors to help drive systems change.

Nilani is a member of the DHSC Food Data Transparency Partnership for Health and has previously held roles as Chair of the Consumer Goods Forum's Sustainable Diets working group, member of the World Food Programme's Retail Advisory Board and Co-chair of the IGD's Industry Strategy Nutrition Group.

Beyond her role at Sainsbury's, she is an Independent Advisor for Nesta (an innovation think tank) and a Board Trustee for Greater Change (a charity tackling homelessness through cash-first initiatives).

Nilani has a Batchelor of Science in Nutrition from the University of Surrey and an Executive Certificate in International Advocacy from the Graduate Institute of Geneva.

Micronutrient deficiency prevention: using the evidence base to inform national, regional, and global policy

Professor Kevin Cashman, University College Cork, Ireland

PRESENTATION SUMMARY

The World Health Organisation (WHO) describes micronutrient deficiency as a form of malnutrition that occurs due to low intake and/or absorption of minerals and vitamins. Deficiencies of micronutrients, such as iron, zinc, iodine, folate, vitamins A, B₁₂ and D, amongst others, compromise the immune system, disrupt childhood growth, and brain development and accelerate multi-system aging and non-communicable diseases ⁽¹⁾. In many cases, emphasis, effort, and even policy, revolves around the prevention of deficiency of one particular micronutrient in isolation. This is understandable as that micronutrient may be among a group of nutrients of public health concern. Vitamin D is a good exemplar. It has been considered a shortfall nutrient by the US Dietary Guidelines Advisory Committee over the last 15 years and thus has received considerable attention in North America over that timeframe. In recent times, it has also received a lot of attention in Ireland, the UK and Europe, as well as more globally. The actions taken to tackle low vitamin D status have been highly dependent on the generation of new data and/or new approaches to analysis of existing data, to help develop the evidence base, inform advise/guidelines, and in some cases, translate into policy generation.

There has also been increasing attention around the public health nutrition issue of hidden hunger. Hidden hunger is the presence of multiple micronutrient deficiencies, which can exist unaccompanied by obvious clinical signs, and which can adversely affect the development potential of individuals, reducing educational attainment, as well as work capacity and productivity, ultimately hindering the development of societies and nations ⁽¹⁾. A widely quoted estimate of the global prevalence of hidden hunger is a staggering two billion people. It is less well appreciated that this widely quoted estimate, now over 30 years old, was based solely on prevalence of anaemia. A recent analysis of pooled global individual-level data on micronutrient status of two key at-risk groups (pre-school-aged children and non-pregnant women of reproductive age) from nationally representative, population-based surveys of 22 countries showed that approximately 1.6 billion women and children are at risk of at least one micronutrient deficiency ⁽¹⁾. Of note, this recent exercise only had data from the UK to inform estimates for Europe.

After introducing the topic, this presentation will use the example of vitamin D as an exemplar of where data and evidence gathering has been very valuable in informing guidance and policy for prevention of deficiency. The presentation will also highlight how lack of data on population micronutrient status in Europe and elsewhere ⁽²⁾, has to-date stymied the quantification of the true prevalence of hidden hunger, and will outline how strategic data sharing and generation is now beginning to address this key knowledge gap. The availability of such data can help inform public policy, underpin nutritional risk assessment and enable effective risk management to eradicate micronutrient deficiency in Europe.

 Stevens et al. (2022) Micronutrient deficiencies among preschool-aged children and women of reproductive age worldwide: a pooled analysis of individual-level data from population-representative surveys. Lancet Glob Health. 10(11):e1590-e1599.
Brown KH, et al (2021). Increasing the availability and utilisation of reliable data on population micronutrient (MN) status globally: the MN Data Generation Initiative. Am J Clin Nutr. 114(3):862-870

BIOGRAPHY

Professor Kevin Cashman, B.Sc., Ph.D, D.Sc., is the Endowed Chair of Food and Health at University College Cork (UCC), a joint position between the School of Food and Nutritional Sciences and the Department of Medicine at UCC. He is also a joint director of the *Cork Centre for Vitamin D and Nutrition Research* at UCC. Professor Cashman's current research interests focus on a number of key public health areas in relation to vitamin D as well as vitamin K and other micronutrients. He has around 230 publications; he was awarded a DSc for published work in 2020. Professor Cashman is currently a member of the Scientific Committee of the Food Safety Authority of Ireland (FSAI) and chairs its Public Health Nutrition sub-committee. He has previously served as a member of expert committees and working groups, such as the FAO-WHO expert group on nutrient requirements for infants and young children aged 0-36 months and the UK Scientific Advisory Committee on Nutrition working group on vitamin D.

Climate change, food systems, nutrition and health

Associate Professor Pauline Scheelbeek, London School of Hygiene & Tropical Medicine, UK

PRESENTATION SUMMARY

Climate change, food systems and nutritional health are intrinsically linked and relationships are bi-directional. Whilst the food system is a major contributor to global climate change, climate change also affects the amount and quality of food we can grow in many parts of the world. Transformational change is needed in food systems to work towards climate change mitigation, but to also make food system much more resilient to climate change and climate shocks.

The talk will briefly show the various impacts and historical trends of the climate change, food systems and health nexus, but will then zoom in on a number of opportunities, changes and interventions that could be pivotal to ensure that we will be able to provide the world's population with sufficient and nutritious food by 2050. These are opportunities in various parts of the food system, including those related to food trade, food production, as well as several opportunities on the consumer end related to healthier and more sustainable diets. Furthermore, policy options will be highlighted. Synergies and trade-offs of various approaches will be discuss, and it will be highlighted how some of these are often not sufficiently considered.

BIOGRAPHY

Pauline Scheelbeek is an Associate Professor in planetary health & nutritional epidemiology at the London School of Hygiene & Tropical Medicine and the Director of the WHO Collaborating Centre on Climate Change, Health and Sustainable Development.

The research of Pauline and her team focusses on discovering healthy, sustainable, resilient and realistic solutions that will accelerate transformational food system change, in the Global North, and improve resilience and healthiness of food systems in the Global South .

Currently she leads the Accelerating Behaviour Change towards Sustainable and Healthy Diets in Europe (ABC-SHEADE) project in which her team studies the substitution behaviour of consumers that had a successful transition from "average" to "sustainable" diets in the UK and Italy over the past decade, using large longitudinal consumer datasets. She co-leads the multi-country Sustainable and Health Food Systems (SHEFS) project in the UK, India and South Africa where her team focusses on food system solutions in resource poor settings, and until recently she also co-led the Food system Adaptations in Changing Environments in Africa (FACE-Africa) project in the Gambia.

Furthermore, Pauline has an interest in improving the speed and accuracy of evidence synthesis in the climate and health domain and leads the Digital Evidence Synthesis Tools for Climate and Health (DEST) project in collaboration with UCL and PIK (Germany).

At LSHTM, Pauline is Programme Director of the MSc in Climate Change and Planetary Health and has recently established an online intensive delivery mode of this programme alongside the face-to-face programme.

Pauline is an active STEM ambassador and frequently organises public engagement activities for school aged children in the UK and sub-Saharan Africa around environment, nutrition and health issues.

Sustainable approaches to ruminant production based upon the one health principles Professor Sharon Huws, Queen's University Belfast, UK

PRESENTATION SUMMARY

It is estimated that over 11.7 percent of humans do not have access to sufficient food and hence suffer from nutrient deficiencies and conditions such as anaemia and stunting. Moreover, it is predicted that the world's population will reach 10.4 billion in the 2080s placing further pressure on our food systems. Ruminant milk and meat are high in protein and micronutrients, therefore providing a nutrient-dense food source for human consumption. However, ruminant production is a major source of methane (CH₄), a greenhouse gas (GHG) with between 27-30 times the global warming potential (GWP) of carbon dioxide (CO₂). Likewise ruminant production and indeed that of other livestock, can also have an indirect effect on carbon emissions due to the carbon associated with importation of feed crops, particularly soya, to fulfil their nutrient requirements. Concomitantly, feeding livestock animals high protein diets can also result in more ammonia (NH_4) being released in urine, which in itself is a local pollutant, but can also be converted to nitrous oxide (N₂O; approx. 278 x the GWPof CO₂) in slurries and soils. Ruminant productivity and CH₄ emissions are mainly a consequence of the biochemical processes that occur within the rumen (the main compartment of the forestomach of ruminant animals) when dietary carbohydrates are broken down by rumen microbes, which include bacteria, protozoa, anaerobic fungi, methanogenic archaea. This process results in the production of volatile fatty acids (VFAs), which provide a source of energy for the animal, but also involves the generation of hydrogen that is used by methanogenic rumen microbes to convert CO₂ into CH₄. Ruminant productivity is also linked to their ability to utilise dietary nitrogen, often referred to as nitrogen use efficiency (NUE), with the most efficient ruminants releasing less NH4 to the environment. Likewise, the efficiency of feed utilisation when expressed as a factor of weight or milk yield, either as Feed Conversion Ratio (FCR) or more commonly Residual Feed Intake (RFI), has been shown to be linked to enhanced NUE and therefore will reduce CH₄ emissions when expressed as per unit meat or milk produced. Taking on board the complexities of ruminant production and the need to enhance human and planetary health, we have investigated feeding of many innovative dietary interventions to ruminants, from chemical additives (3-NOP), oils, through to macro and microalgae. These dietary interventions have many advantages and disadvantages, and our data shows that microalgae have much promise in terms of providing an alternative protein source to soya, enabling an enhancement of long-chain omega-3 (LCPUFA) content of meat and milk due to their high LCPUFA content (>40mg/100g in lamb studies), whilst reducing CH₄ emissions (up to 23%) from ruminants. Likewise, microalgae are not reliant on land for growth and therefore do not compete for land in their production. In summary, ruminant dietary interventions, such as microalgae offer circular interventions to ensure food security, human and planetary health under the concept of needing 'one health' based solutions for our food systems, which do not have unintended consequences elsewhere.

BIOGRAPHY

Professor Huws is an expert in Animal Science and Microbiology within the Institute for Global Food Security and the School of Biological Sciences, Queen's University, Belfast. She is also the Director of Research within the School of Biological Sciences. Her own research interests lie in understanding the interplay between livestock gastrointestinal tract microbes, food security and planetary health. Prof Huws' research is driven largely by the need to ensure food security and the health of people, whilst ensuring that this is not to the detriment of the environment, particularly in relation to greenhouse gas (GHG) emissions. She has published over 100 papers in peer-reviewed journals, with many in World-leading journals (e.g. Nature Communications and Microbiome). Prof Huws has obtained over £10M in funding in the last 5 years (e.g EU Horizon 2020 projects MASTER & Holoruminant, UKRI responsive mode and Canada iPAP projects, FACCE ERA Net gas projects RumenPredict, Seasolutions & INTEGRITY) in the areas of ruminant health, production and mitigation of GHG emissions. Sharon also coordinated the global 'Rumen Microbial Genomics' network' for the Global Research Alliance for Methane Mitigation for 10 years, is an editor-in chief of the journal Animal Microbiome and a senior editor of the journal Microbiome. She is currently leading a global project, involving partners from 21 countries; ACRONYM: RUMEN Gateway) based on culturing, genotyping and phenotyping >5,000 rumen microbes to enhance understanding of their function and enhance innovative methods of reducing greenhouse gas emissions from ruminants (https://www.qub.ac.uk/Research/GRI/TheInstituteforGlobalFoodSecurity/institute-forglobal-security-news/RumenGateway.html).

Complex, contradictory, and confusing: exploring consumer dilemmas in navigating nutrition knowledge

Professor Mary McCarthy, University College Cork, Ireland

PRESENTATION SUMMARY

This presentation is set against shifting consumer behaviour towards healthier and sustainable food choices is proving problematic. While nutritional science professionals provide expert guidance on what to eat, in the form of food based dietary guidelines (FBDGs), based on current scientific evidence, adherence to FBDGs is concerningly low. The significant role of nutritionists in understanding the dynamic relationship between food and health can be traced back for over a century. Indeed, Atwater (1904) advocated a diet with variety, which focused on moderation and proportionality of nutrient-rich foods while taking account of calories, fat, sugar and starch. From this point of departure, the recognition of a link between diet and the prevalence of deficiency-related diseases and then chronic disease has resulted in significant changes in how food and health is communicated to the public. However, the journey of communication has not been straightforward with public health guidelines being revised and adjusted over the decades to reflect new insights. At the most general level these narratives shifted from 'eating more of' to 'avoidance of' to 'portion control'.

Importantly, past communications frame the public's understanding of healthy eating and have implications for the interpretation of any future communications. Equally such communications shape the food industry's offerings and marketing activities and thus dietary information is received within the broader ecosystem (including socio-cultural). Consumers are confronted with multiple messages from multiple sources of dietary information today, which compete with FBDGs. This has a profound influence on responses (cognitive, emotional and behavioural) to such communications and is further complicated due to a range of individual characteristics that shape everyday lives.

This presentation explores the relevance and importance of 1) sustainable healthy (SuHe) dietary behaviour, 2) the nutrition narrative that has evolved and is emerging in relation to such behaviour, and 3) the challenges in facilitating consumer transition towards SuHe food choices. Furthermore, drawing on a broad social psychological theoretical base, consideration is given to the role of the individual in the transformation of food behaviours and the impact of strongly held traditional food beliefs on responses to communications/ policy changes. Existing beliefs can impede the emergence of new food behaviour patterns and practices, and can be expressed as resistance to new information. It is proposed that the role of information, that jars with existing belief systems, in triggering disorientating dilemmas and evoking emotions requires exploration in affecting change. Through this type of enquiry, sources of individual resistance or adoption can be understood to better inform public health policy and communication.

Promising approaches and routes to integration of new beliefs into SuHe food related behaviour change are reflected on.

BIOGRAPHY

Mary, a Professor of Marketing at University College Cork, research interests lie in the field of consumer behaviour with reference to food, health and sustainability. She explores the doings and happenings of individuals in their everyday lives and considers the decision processes that underpin behaviour and acceptance of innovative solutions. The research undertaken has been collaborative, involving interdisciplinary/interinstitutional teams, and has leveraged both national and international funds. She has secured research funding from both National and International Bodies (EU). Mary's work contributes both to academic advancement and practice with work on consumers providing policy guiding evidence along with setting current observations within a broader social context. Mary has also been called as an expert reviewer of international funded research initiatives along with acting as PhD external examiner, supervised 9 PhD students and mentored early career researchers and post-Docs. She has also been a member of the *safe*Food Advisory Board, 2016-2019. Most recently she is a Pl on the jointly DAFM and DAERA funded SuHe Guide project and is involved with several SFI Research Centres.

She has published over 85 peer review journal papers with an h-index of 20(Scopus); Google Scholar citation, H and i10 index are 5869, 42 and 74 respectively.

Mary is current the Vice-Dean for Research and Innovation at Cork University Business School and Vice-Head for Research and Innovation in the College of Business and Law, UCC.

Animal-source foods for nutrition, environment, and society: finding a balance

Dr Stella Nordhagen, Global Alliance for Improved Nutrition, UK

PRESENTATION SUMMARY

While malnutrition (including both undernutrition and overweight/obesity) remains a persistent challenge in countries around the world, it is far from alone as a threat to human development and wellbeing – and is increasingly viewed as intersecting with issues of climate change and environmental degradation. At the crossroads of these issues, animal-source foods (ASF, including meat, poultry, fish, dairy, and eggs) have attracted considerable attention in recent years, for both their role in diets and their environmental impacts. For example, the 2019 *Lancet* publication 'Food in the Anthropocene', which highlighted the environmental impact of diets (including ASFs), is among the most-cited papers in policymaking worldwide. Heated debate has focused on the potential benefits of reducing consumption of ASF, including through replacement with so-called 'alternative proteins' – as well as the potential risks for nutrition associated with this. ASF production also plays an important role in livelihoods, particularly in low- and middle-income countries. ASF are also central to many food cultures and traditions, highly valued by many consumers.

As the issues associated with ASF are intertwined, they must be considered jointly and with nuance. Given wide global ranges in ASF consumption, environmental footprints, and malnutrition rates and types, attention to equity is also critical. This interdisciplinary talk aims to examine these complex issues, providing an overview and discussion of ASF – including nutrition and health, environmental impacts, and socio-economic issues. The importance of considering context, nuance, and equity will be highlighted throughout.

BIOGRAPHY

Stella Nordhagen is researcher and development practitioner who focuses on food systems and specifically on how to improve global nutrition while achieving other social goals. Her areas of research interest include market-based approaches to improving diets and nutrition, climate change and nutrition, gender equity, and drivers of food choice. She has experience conducting research in several African and Asian countries, particularly in West Africa, where she lived for several years. She is currently a Senior Technical Specialist with the Global Alliance for Improved Nutrition (GAIN) in Geneva, Switzerland, where she oversees research and learning activities related to food systems in Africa and Asia. Dr. Nordhagen also serves on several commissions and advisory boards within the food and nutrition sector, including the Food Systems Economics Commission and the Food Systems Countdown Initiative, and publishes research regularly in peer-reviewed journals. Prior to joining GAIN, she worked with Helen Keller International, the Harvard Initiative for Global Health, the Institute for Health Metrics and Evaluations, and the International Center for Research on Women. Dr. Nordhagen holds a BA from Middlebury College and an MPhil and PhD from the University of Cambridge.

She has published over 85 peer review journal papers with an h-index of 20(Scopus); Google Scholar citation, H and i10 index are 5869, 42 and 74 respectively.

JULIE WALLACE AWARD LECTURE The role of nutrition in dementia risk reduction: Current evidence and context Dr Oliver Shannon, Newcastle University, UK

PRESENTATION SUMMARY

Approximately 1 million individuals in the United Kingdom (UK) and 55 million individuals worldwide are currently living with dementia. As the median age of the world's population rises, the number of dementia cases is expected to more than double by 2050, creating a huge and unsustainable burden on public health systems and the economy. There is therefore an urgent need to identify feasible, effective, and scalable strategies to prevent or delay the onset of dementia.

There is now mounting evidence that appropriate nutrition can improve cognitive function and lower dementia risk. In particular, recent studies suggest that consumption of healthy dietary patterns, such as the Mediterranean or MIND diets, can offset age-related cognitive decline by up to ~5 years and reduce dementia risk by up to ~30%. Such whole diet approaches may be especially effective at reducing dementia risk due to the synergistic/additive effects on brain health of their many constituent foods/nutrients. A range of mechanisms have been identified through which the Mediterranean and MIND diets may impact brain health, which strengthens the biological plausibility to these observed effects. These include systemic (e.g., improved cardiometabolic health and alterations in the composition/metabolism of the gut microbiome) and brain-specific (e.g., decreased β -amyloid deposition, reduced white matter hyperintensities and increased brain volumes) effects.

Drawing upon findings from recent large-scale epidemiological studies and randomised controlled trials, this presentation will critically discuss the latest evidence on the role of appropriate nutrition in reducing dementia risk, with a particular focus on healthy dietary patterns. Potential mechanisms of action will be discussed, as will wider developments in the field of dementia research, which provide context for understanding the role of nutrition for dementia prevention. This will include discussing the potential interplay between diet and other lifestyle factors (e.g., physical activity, sleep, and social support) in dementia risk reduction and recently developed pharmacological treatments (e.g., anti-amyloid immunotherapies) which, it is hoped, will change the dementia landscape in the coming decade. The presentation will end by exploring current gaps in our knowledge and outlining a roadmap for future research in this area.

BIOGRAPHY

Dr Oliver Shannon is an early career researcher and Lecturer in Human Nutrition & Ageing at Newcastle University, UK. His research focuses on the role of appropriate nutrition, especially healthy dietary patterns, in improving cardiovascular health and lowering dementia risk. He has published >70 peer-reviewed journal articles, including first or senior author publications in field-leading journals such as *The American Journal of Clinical Nutrition (AJCN)* and *British Journal of Nutrition (BJN)*. He has been a member of the

Nutrition Society for several years, during which time he has: 1) Represented the Nutrition Society at the Nutrition: Science and Health APPG at the Houses of Parliament, presenting his work on diet and brain health to MPs and other policy makers; 2) Contributed towards establishing the Nutrition & Healthy Ageing SIG (led by Dr Miriam Clegg and Dr Claire McEvoy); 3) Delivered a webinar for the Nutrition Society Academy on the Mediterranean diet, health and performance; and 4) Chaired/judged poster presentations at the Nutrition Society Winter Conference. He is a Section Editor in Epidemiology for the *European Journal of Nutrition* and has recently established (co-lead with Dr Sarah Gregory, University of Edinburgh) a Network of researchers exploring how following UK-specific dietary guidelines impacts brain health. He lives in Newcastle with his fiancée, Ellie (with whom he is currently planning their wedding) and their dog, Nugget – a small but sassy Cavapoo who loves to chase bikes.

Translating data into policy informing decisions: current and future perspectives from EFSA

Dr Maria Anastassiadou, European Food Safety Authority, Italy

PRESENTATION SUMMARY

The European Food Safety Authority (EFSA) provides independent scientific advice to EU risk managers on a wide range of food safety related issues and communicates on existing and emerging risks in the food chain. This advice helps to protect consumers, animals and the environment.

Data is one of the essential building blocks of EFSA's scientific work. EFSA collects data from various information sources including scientific literature, biological and chemical monitoring programmes, food consumption and composition, and regulated product application dossiers. Fit-for-purpose data is a prerequisite for EFSA's scientific assessments.

To continue delivering the highest value for society, EFSA must keep abreast of new scientific, technological and societal developments. EFSA also engages in partnerships as an essential means to address the growing complexity in science and society, and better connect and integrate knowledge, data and expertise across sectors.

The presentation will provide insights into EFSA's data related activities and future perspectives in the following key areas of EFSA's 2027 strategy: one substance one assessment, combined exposure to multiple chemicals, environmental risk assessment, risk-benefit analysis, new approach methodologies and antimicrobial resistance. The challenges raised by the increasing societal demands for safe, nutritious and sustainable food will also be discussed.

BIOGRAPHY

Maria Anastassiadou is Scientific Officer at the European Food Safety Authority's Feed and Contaminants unit. She holds a PhD in chemistry from the university of Toulouse III and works for over 20 years as regulatory scientist in the food safety area. From 2002 to 2014, she worked at the General Chemical State Laboratory of Athens in the areas of food ingredients and packaging, contaminants in food, food allergens and novel foods. Since 2014, she works at EFSA where she manages Commission mandates on the risk assessment of food flavourings (2014-2018), pesticide residues (2018-2021) and chemical contaminants in food and feed (2021 to date). Among others, Maria contributed to the development of EFSA scientific reports on the cumulative risk assessment of pesticide residues and to the work of the EFSA's Operational Committee on 'one substance one assessment', both supporting the implementation of the EU's chemicals strategy for sustainability. Maria has been member of various regulatory, policy and scientific working groups, scientific coordinator of the EFSA's working groups on food flavourings and chemical contaminants as well as co-author of over 50 EFSA scientific outputs.

Translating evidence into policy - the Nordic nutrition recommendations

Professor Maijaliisa Erkkola, University of Helsinki, Finland

PRESENTATION SUMMARY

The Nordic Nutrition Recommendations 2023 (NNR2023) serve as the scientific foundation for national dietary guidelines and nutrient recommendations across the Nordic and Baltic countries. The culmination of five years of collaborative effort involving hundreds of researchers and experts, NNR2023 represents the largest and most globally extensive project in Nordic cooperation to date. In its sixth edition, NNR2023 not only offers guidance on foods beneficial for health but also addresses their environmental impact for the first time. The new edition features updated dietary reference values for 36 nutrients, including several for the first time, and expands the food-based dietary guidelines to encompass 17 food groups, making NNR2023 the most comprehensive version to date. This landmark integration sets a new precedent by paralleling the promotion of optimal health with ecological considerations.

The Nordic and Baltic countries strive to adhere to a relatively uniform protocol when updating their national nutrition recommendations, with NNR2023 serving as a pivotal scientific basis. In Finland, the dietary reference values for nutrients align entirely with NNR2023. When revising our food-based dietary guidelines, we consider the Finnish food environment, as well as social, cultural, and economic sustainability perspectives. Based on these factors, we make adjustments and minor modifications on NNR2023, such as refining guidance on food choices or quantities. As part of this process, we develop reference diets aligned with NNR2023 guidelines, taking into account our national food culture. These diets are then modeled to assess nutrient intakes and ensure nutritional adequacy across various population subgroups. Additionally, we quantify the potential environmental benefits of adopting NNR2023, thereby promoting sustainable food consumption practices.

In the adjustment of sustainable food-based dietary guidelines at the national level, we employ a science-based, transparent, and deliberative approach. This involves collaborating with experts in nutrition, health research, environmental and climate research, and food systems stakeholders. Food and nutrition experts play a pivotal role in both conducting the modeling and interpreting the results to ensure that dietary shifts lead to optimal nutrition and positive health outcomes.

Nutrition recommendations play a pivotal role in national health promotion efforts, enhancing work capacity, preventing diseases, and promoting health equity. The key is also to ensure the growth, health, and wellbeing of vulnerable population groups. Nutrition recommendations inform health and food policies, guide food choices, set criteria for public food services, direct food product reformulation, and support education and research initiatives. The updated Finnish recommendations are scheduled for publication in November 2024, continuing the nation's commitment to evidence-based health and food policies.

BIOGRAPHY

Professor in Public Health Nutrition, Professor Erkkola has wide-ranging research experience in public health nutrition, nutritional epidemiology, sustainable food system, and health equalities. Heading the research team "Family Nutrition and Wellbeing," she places particular emphasis on nutrition-related health issues affecting vulnerable populations such as children, pregnant and lactating women, immigrants, and individuals with low socioeconomic status. Her research interests span dietary assessment methodologies, sustainable and healthy diets, food education, and sociodemographic disparities in health behaviours. Currently, she is engaged in several projects, including DAGIS (Increased Health and Wellbeing in Early Childhood Education and School Children) and LoCard (Harnessing the Potential of Customer Loyalty Card Data), among others. Professor Erkkola served as a working group member of the Nordic Nutrition Recommendations 2023 project and currently leads the development of the Finnish Nutrition Recommendations 2024. Additionally, she holds the position of chair at the Finnish Society for Nutrition Research. In her free time, she incorporates adjectives omitted from scientific papers into narrative-driven non-fiction books tailored for children.

Participatory approaches in human nutrition research Professor Michelle McKinley, Queen's University Belfast, Ireland

PRESENTATION SUMMARY

The importance of public and patient perspectives in health research has been recognised for decades as being central to improving the quality, relevance, and impact of research ⁽¹⁾. It represents a shift in the outdated paradigm of researchers being the 'experts' to a partnership and collaboration between researchers and those affected by the research ⁽²⁾. The Health Research Authority (HRA) defines public involvement in research as "research that is done 'with' or 'by' the public, not 'to', 'for' or 'about' them. It means that patients or other people with relevant experience contribute to how research is designed, conducted and disseminated⁽³⁾."

Participatory research approaches can be used at all stages of the research process from problem identification and priority setting to development of the research question, design of research methods and interpretation and dissemination of results. In the UK context, the term 'participatory research' is often used interchangeably with the terms 'PPI (Personal and Public Involvement)' or 'PPIE (Patient and Public Involvement and Engagement)'.

Over the last decade, many researchers across multiple disciplines have actively engaged a wide range of stakeholders in the research process, resulting in shared decision-making and ensuring the research is relevant and translational in their lives ⁽⁴⁾. However, the use of PPI is still evolving and can be highly variable between disciplines. Research funders recognise both the moral and quality imperatives for PPI and expect to see it embedded in a meaningful way in funding applications.

This talk will explore the value and challenges of PPI in research and will provide some practical examples of incorporating participatory approaches in different types of nutrition research with a variety of population groups.

1. Entwistle VA, Renfrew MJ, Yearley S, Forrester J, Lamont T. Lay perspectives: advantages for health research. BMJ 1998; 316: 463.

2. Bowness B, Henderson C, AkhterKhan SC, Akiba M, Lawrence V. Participatory research with carers: A systematic review and narrative synthesis. *Health Expectations* 2023; 27: e13940.

3. Health Research Authority. Planning and improving research – Best practice – Public involvement; https://www.hra.nhs.uk/planning-and-improving-research/best-practice/public-involvement/; accessed 30/03/2024.

4. Vaughn LM & Jacquez F. Participatory Research Methods – Choice Points in the Research Process. *Journal of Participatory Research Methods* 2020; *1*(1).

BIOGRAPHY

Michelle McKinley is a Professor of Nutrition at the Centre for Public Health, School of Medicine, Dentistry and Biomedical Sciences, Queen's University Belfast. Michelle's research investigates the ability of dietary interventions to modify nutritional status and risk

of chronic disease, particularly diabetes and cardiovascular disease, as well as exploring novel approaches to encouraging and supporting diet and lifestyle behaviour change and weight management throughout the life course. Examples of research activities in these areas include developing and evaluating complex behaviour change interventions in the school-setting; before, during and after pregnancy; and for people with type 2 diabetes. This work encompasses the use of m-health and e-health technology to support behaviour change. Michelle is a Registered Nutritionist (Public Health) and an elected member of The Nutrition Society Advisory Council (Council member - Academia).

Good practices and misconceptions in machine learning in nutrition research

Daniel Kirk, King's College London, UK

PRESENTATION SUMMARY

Machine learning holds significant promise for addressing unresolved issues and advancing nutrition research, which has attracted interested researchers to leverage its potential. Whilst ready-made data processing and machine learning pipelines facilitate its adoption, common misconceptions about the capabilities of machine learning have led to its improper use and misinterpretation of research findings. The consequences of this include false positive findings, spurious associations, and a general dilution of the quality of research in the nutrition field. In order to preserve research quality and obtain replicable results, there must be a better understanding of how to properly apply and understand the results of machine learning in the research field. This talk will discuss the good practices and misconceptions in the application of machine learning and the interpretation of results in nutrition research. Themes discussed will include data processing, data reduction and feature selection, quantifying uncertainty, and validation of results. As data and techniques for their analysis become increasingly available, a nuanced understanding of machine learning is needed to maintain nutrition research standards.

BIOGRAPHY

Daniel Kirk is a PhD Researcher at the department of Twin Research and Genetic Epidemiology, King's College London, with a bachelor's biochemistry degree (first class honours; Nottingham Trent University) and a master's degree (cum laude) in Nutrition and Health at Wageningen University Research. After his post-graduate study, he continued working at Wageningen University as a researcher, with a focus on epidemiology and machine learning in nutrition research. In his current work at King's College University, he uses computational techniques to identify relationships between data in the Twins UK dataset and health, with a focus on the metabolome and the microbiome. His key publications relate to machine learning in nutrition research, precision nutrition, ChatGPT in nutrition research, and bacteriophages of the gut microbiome in cardiometabolic diseases.

Using citizen science to monitor food intake as we move towards sustainable diets and a sustainable food system

Dr Christian Reynolds, City, University of London, UK

PRESENTATION SUMMARY

For the research community, citizen science offers engagement, empowerment, and the creation of viable solutions to food system and diet-related challenges. Citizen participation and engagement in scientific research is a promising method for knowledge generation on diet and nutrition. It also offers a mechanism for empowering citizens to take an active role in wider food systems transformations across production, processing, and supply. These new forms of "citizen science" have been enabled by recent technological advancements in sensing and data processing.

This paper reviews the existing literature (since 2020) to highlight how 1) citizen engagement in food systems and nutrition research has the potential to bring citizens on board, supporting the growth of a food culture of resilience and sustainable practices, including dietary change; 2) help researchers understand which changes work and which do not.

I specifically highlight the FSA's programme of citizen science work: a collaboration between UK Research and Innovation (UKRI), the FSA and Food Standards Scotland, to develop a joined-up approach to tackle the challenges of maintaining safe food in the UK. This funded 6 projects (2020-2022): Engaging food hypersensitive communities in citizen science; Exploring the chopping board microbiome; Citizen science and antimicrobial resistance (AMR); Using citizen science to explore plant breeding and investigate foodchain transparency for novel breeding methods; Food allergy awareness champions: Towards improving food safety standards in online food procurement for people with food hypersensitivity; and Finding the right formula – establishing the feasibility of doing science in the home to assess the safety of Powdered Infant Formula preparation.

I also provide examples of other recent citizen science research including examples of Monitoring Food Intake; Behavioural Observations; Community-Based Research; and Educational Initiatives. I end with practical advice for nutritionists wanting to start using citizen science approaches.

BIOGRAPHY

Dr Christian Reynolds is an expert in food loss and waste, sustainable diets, and food policy. He has researched and addressed these issues globally and has published extensively. He has provided evidence to parliaments and played a role in developing standards for food loss and waste accounting. His recent work focuses on citizen science, sustainability in the UK food system, and the environmental impact of public procurement. Currently, he is leading a project on reducing plastic packaging and food waste through product innovation simulation. He is also involved in a project investigating the effects of food taxes on the entire food system. He has previously held positions at WRAP where he worked on international food sustainability and integrating healthy sustainable eating and food waste reduction policies. Additionally, he has collaborated with global partners such as the World Bank, NRDC, and WWF.

National food composition data – capabilities and culpabilities in monitoring food intake on an individual and population basis

Dr Maria Traka, Quadram Institute Bioscience, UK

PRESENTATION SUMMARY

'A knowledge of the chemical composition of foods is the first essential in the dietary treatment of disease or in any quantitative study of human nutrition'. These were the words of Robert McCance and Elsie Widdowson, the UK pioneers in food composition, taken from the first edition of what later became The Composition of Foods in 1940. This still resonates today. The current UK McCance and Widdowson's Composition of Foods Integrated Dataset (CoFID) contains data on macronutrients, micronutrients, individual fatty acids, vitamin fractions, phytosterols, and organic acids where available, a total of 174 components. They are essential in a variety of settings, including clinical practice, research, public health (e.g., estimation of average national nutrient intakes and promotion of healthy food initiatives), agri-food industry (e.g., food labelling, nutrition declarations and claims) and digital personalised nutrition applications.

Understanding the source of food composition data is crucial to ensure they are appropriately used. The UK CoFID contains information predominantly derived from analytical values. Data are average values for 'generic foods', which take into account the context of the UK retail market, popularity of consumption as reported by the National Diet and Nutrition Survey (NDNS), cooking methods, seasonality if appropriate, and variations in industry formulations (e.g. fortification practices). Nutrient data for 'generic foods' aim to generalise the potential nutrient composition diversity available to consumers and differ from experimental research data that provide exact nutrient information on single foods and are suitable for research purposes but not public health monitoring and dietary assessment.

Maintaining national data is paramount as agricultural practices, industry reformulations and regulations change over time, however it is costly. Nowadays, a significant amount of nutrient information is being generated for branded food products. This presents opportunities in the future for industry and national composition curators to work together and focus resources where there are collective gaps, mainly for micronutrients and minerals. Similarly, new machine learning methodologies are emerging to support nutrient component gap filling and crowdsourcing of on-pack nutrient information. The challenge will be to ensure rigorous data quality standards are underpinning any new information.

Additionally, as we recognise the importance of food in preventing disease mediated by its non-nutrient components (e.g., plant-derived bioactives such as polyphenols, glucosinolates, isoflavones etc), there is a need to expand nutrient composition information further. Similarly, certain bioactives can also act as anti-nutrients, (e.g. phytate inhibits iron absorbion), which makes it crucial to be able to link compositional information between nutrients and bioactives. Likewise, information on the composition of additives used by the food industry to achieve the desired physical and sensorial characteristics for new products has never been more relevant than now. In order to generate evidence-based

research on any causal links between processing and health outcomes, it is crucial to have detailed compositional information on all these components.

Finally, composition tables need to address health inequalities by including cultural and ethnic foods consumed by minorities and under-represented communities, and also incorporate sustainability metrics for delivering population recommendations for sustainable nutrition. In this way, expanded food and component representation in national composition tables will continue to support the transformation of our food systems towards sustainable diets for healthier people and a healthier planet.

BIOGRAPHY

Maria is the Head of Food & Nutrition National Bioscience Research Infrastructure (F&N-NBRI), based at Quadram Institute Bioscience (QIB). F&N-NBRI is a national coordinating 'hub' in food, nutrition and health and the leading national provider of new and continuously updated data, tools and services vital for public health, research and innovation. Our Composition of Foods Integrated Dataset (otherwise known as McCance and Widdowson CoFID data), our food bioactives composition datasets, and our associated tools are used by academia, government and industry and are essential for high-quality research on relationships between diet and health and delivery of key national strategic aims that support adoption of healthier and sustainable diets.

Maria's research focus is understanding the role of plant-rich diets in improving health. She has an active interest in using data-driven approaches in personalised nutrition, prevention of non-communicable diseases, and the importance of the microbiome in modulating response to complex diets.

Maria actively participates in international efforts to coordinate FAIRdata in nutrition and is a director of EuroFIR, an association leading composition data harmonisation internationally. She was a PI in the Food and Nutrition Security Cloud (FNS Cloud, Horizon2020, 2019-2022; https://www.fns-cloud.eu/) leading the technical delivery of linking diet and microbiota datasets available in public resources. This has led to the development of a metadata search tool for diet and microbiome, Fairspace, as well as the development of the FNS-ontology. Maria is also leading work within the ELIXIR Food and Nutrition community on diet and microbiome data interoperability. She has been involved and led in nationally-and internally funded projects around diet and health. More recently she is part of the Zero Hidden Hungen Micronutrients project (ZHH, HorizonEurope, 2024-2028), where her team will be estimating bioavailable iron and zinc intakes across European population intake data and will be modelling impacts as we transition towards sustainable future diets.

Maria is also the co-Director of the Food Safety Research Network, based at QIB, which connects food industry, food and health policymakers and academia through collaborative research to protect the UK from foodborne hazards.

Supporters

The Nutrition Society, like many other scientific societies around the world, welcomes support for the work it does. The support the Society raises helps to subsidise fees for delegates to attend the Society events, which directly benefits the Society's members. However, it is important to note that supporters do not have a say in the topics covered at Society events, the people invited as speakers (except in the case of Satellite Symposia), or the way they are run.

The Society is absolutely committed to maintaining its reputation as an independent learned society. As a result, support is kept separate from science. The Society makes this point clearly on its website in the sponsorship policy at www.nutritionsociety.org/sponsorship-policy and very clearly to the Society's supporters.

Additionally, support helps the Society to:

- Invite internationally renowned experts to speak at conferences, so the members benefit from their presentations.
- Hire suitable venues and arrange social functions that allow members to network.
- Support student bursaries allowing the next generation of nutritionists to attend and present abstracts at conferences.
- Support travel grants allowing members to attend events.

As a charity, all the support the Society receives in relation to activities, benefits Society Members.

The Nutrition Society would like to thank the following organisations for their generous support:



PepsiCo

PepsiCo is a global leader in convenient foods and beverages with products enjoyed by consumers more than one billion times a day in more than 200 countries and territories around the world. For more than 40 years, PepsiCo has been manufacturing and supplying delicious foods and beverages in the UK, and every day reaches millions of consumers. For example, our portfolio of grains encompasses the world-famous brand of Quaker Oats.

Sustainability is at the heart of our business; from the crops we grow through to our manufacturing operations and the packaging of our products. PepsiCo Positive (pep+) is our strategic end-to-end transformation that puts sustainability and human capital at the centre of how we will create value and growth, by operating within planetary boundaries and inspiring positive change for planet and people. Across our portfolio, we offer something for every occasion with our range of diverse foods and beverages with great flavours and ingredients, as well as choices which are lower in saturated fat, salt and added sugars.

PepsiCo's Health and Nutrition Sciences (H&NS) team is part of the PepsiCo Life Sciences function, which explores the relationships between nutrition, diet, health and performance and provides one voice for PepsiCo in the interpretation, communication and translation of science, with a specific focus on nutrition science, to support innovation. The team is made up of dedicated professionals who strive to advance nutrition as part of PepsiCo's Positive Choices agenda across our diverse portfolio.

PepsiCo Health and Nutrition Sciences website is now live! Join our professional network here www.pepsicohealthandnutritionsciences.co.uk and stay informed on PepsiCo's H&NS research, infographics and webinars.

Nutritics Ltd

Founded in 2012 by brothers Damian and Ciaran O'Kelly, Nutritics was first developed to support the dietary management of elite athletes and patients in a clinical setting. Its primary function was digital dietary analysis using comprehensive gold standard Nutrition composition data. Over ten years later, Nutritics is a successful food data management software platform that provides end to end food, recipe and menu management.

Nutritics has been used by over 160,000+ users from 150+ Countries and is the only company in the world to have been awarded the Gold Standard Recipe Calculation Certification by the European Food Information Resource (EuroFIR). Nutritics employees include healthcare professionals, regulatory experts and scientific researchers.

Nutritics' software enables customers to unlock the hidden value of food data providing automated dietary analysis in research, clinical, nutritional and elite sport settings. In addition, food businesses leverage their recipes, allergen analysis, create labels, plan meals, publish menus and measure environmental impact. In 2023, over 62% of Nutritics users were based on Education & Research, 30% in Food, 5% in Health and 3% in Sport. Customers include Aramark, Compass group, Emirates, Health Services Executive (HSE), National Health Service

(NHS) England, Shake Shack, Starbucks, Pepsico, Unilever, and WSH group. Nutritics is the software partner on European Commission funded projects including LIFE Climate Smart Chef and GoGreenRoutes. The Nutritics vision is to be the world's most trusted food data management software, delivering valuable insights to enable better informed food choices. Our mission is to continuously innovate to make food data more reliable, more accessible and more valuable. To find out how Nutritics can help you work smarter, not harder, in your role please sign up for a free trial at www.nutritics.com or get in touch with us at support@nutritics.com and we would be happy to help.

British Society of Animal Science (BSAS)

The British Society of Animal Science (BSAS), established in 1944, is a charity which is dedicated to supporting animal science in the UK and Ireland. The Society's core focus is livestock science; communicating, influencing and engaging interest in how sustainable livestock production systems can contribute to positive socio-economic and ecosystem outcomes. BSAS aims to stimulate interest and discussion with focus on addressing climate change and wider ecosystem challenges related to livestock production by providing a platform for the dissemination of current and state-of-the-art research-based knowledge to all stakeholders within the agri-food sector and broader society. The Society encourages and supports the development of early career professionals in the field of animal science and associated areas helping them to develop, throughout their careers, into tomorrow's leaders. BSAS is keen to work with individuals and organisations that are committed to the advancement of sustainable livestock and healthy and nutritious food production including the wider veterinary and agri-food and consumer-oriented sectors.

Academy of Nutrition Sciences

The Academy of Nutrition Sciences (ANS) was established in 2019 to provide a collective and authoritative voice for the nutrition science discipline, including those engaged in research, education and training, clinical practice, and nutrition science communication. The Academy is a result of a longstanding collaboration between four organisations: the Association for Nutrition, the British Dietetic Association (BDA), the British Nutrition Foundation, and the Nutrition Society. These four organisations are the founder members of the Academy. The Academy has a strong interest in nutrition research excellence, development of the nutrition science discipline and application of the outcomes of rigorous nutrition science for public benefit. The Academy also seeks to reduce the levels of misinformation about nutrition and health and improve understanding of how evidence is scrutinised and evaluated to produce dietary recommendations. The main audience for the Academy's work is the nutrition science community/profession and its stakeholders (including government/policy makers and research funding agencies). To date, the Academy's main outputs have been Position Papers, published open access in peer reviewed journals.

Please find links to the three ANS position papers to date on Evidence for Dietary Recommendations, Evidence for Health Claims and Evidence for Nutrition Interventions for Individuals. The three position papers have been a focus of a series of Academy of Nutrition Sciences webinars hosted by the British Dietetic Association in May 2024, which explored the challenges identified and the recommendations made in the Position Papers. Recordings of the webinars are free to access and can be found at Academy of Nutrition Sciences Webinars - British Dietetic Association (BDA).

Yakult UK and Ireland

Yakult Science for Health is an educational hub for healthcare professionals to deepen their knowledge and understanding of the gut microbiome, probiotics and more.

Science and gut health have always been at the heart of the Yakult company since the microbiologist Dr Shirota became the first in the world to successfully select and cultivate a strain of lactic acid bacteria, in Japan in 1935. This groundbreaking discovery of the *Lacticaseibacillus paracasei* Shirota strain, carefully selected for its ability to reach the gut alive, paved the way for the development of Yakult's iconic drinks. Ever since its inception, Yakult has been focused on people's health and happiness. Such a belief has driven the advancement of scientific research and development of product ranges. Today, Yakult's commitment to science remains unwavering, by supporting and funding independent medical and scientific research worldwide.

Continuing this passion, the team of qualified nutritionists and scientists at Yakult Science for Health support healthcare professionals, researchers and students by offering a range of resources and services to expand their knowledge of the latest research in gut health.

To empower individuals, Yakult Science for Health provides:

- Free tailored educational workplace talks based on the latest systematic reviews and human studies.
- Free educational webinars with leading experts.
- Downloadable and e-learning resources for healthcare professionals and patients (including topics such as gut-immune axis, women's health, diet diversity and much more).
- Monthly e-newsletters detailing the latest events, science and information from Yakult Science for Health.
- Microbiome Matters podcast.
- Hosting Yakult Science for Health events to share the latest evidence surrounding the gut microbiome.
- Presence and presentation talks at scientific conferences and symposiums across the UK and Ireland.
- Collaborations with leading academic institutes on gut microbiome research.

EuroFIR AISBL

The European Food Information Resource (EuroFIR AISBL) is a non-profit international association dedicated to improving food composition data and promoting its use for public health and food and nutrition research. Founded in 2009, EuroFIR brings together experts from various fields including food and nutrition science to facilitate collaboration and provide reliable food composition data that is increasingly findable, accessible, interoperable, and re-

useable. At the heart of EuroFIR's mission is the development and maintenance of a comprehensive food composition database for Europe. These databases contains detailed information on the nutrient content of foods including macro- and micronutrients as well as bioactive and botanical compounds. By compiling and standardising food data, EuroFIR enables researchers, policymakers, healthcare professionals, and the food industry to make informed decisions regarding dietary guidelines, nutrition labeling, and food product development/reformulation amongst other activities. EuroFIR has a crucial role in promoting data exchange, harmonisation, and standardisation amongst European organisations. By facilitating collaboration between national food composition compilers in particular, and standardising methodologies for data collection and analysis as well as harmonisaton of datasets, EuroFIR ensures that food information provided is accurate, reliable, and comparable across different regions. Furthermore, EuroFIR AISBL is actively involved in research projects, training programmes, and outreach activities aimed at raising awareness about the importance of food and nutrition in promoting healthy habits. Through its efforts, EuroFIR contributes to advancing scientific knowledge in the field of food, nutrition, and health, supporting evidence-based policy-making, and ultimately improving public health outcomes across Europe and beyond.

Agriculture and Horticulture Development Board (AHDB)

AHDB is a non-departmental government body sponsored by DEFRA, formed in 2008 and funded by a statutory levy, it works to unify the agricultural industry and provide independent scientific evidence and insight to further its success at home and overseas. Supporting greater harmony between producing nutritious food and enhancing the environment weaves into everything from consumer marketing to farm-based research at AHDB. All with the aim to unify this immensely passionate and dedicated industry to lift production, drive innovation and continue our world-class production standards.

Being politically and commercially independent, and evidence based, AHDB is uniquely placed to support British agriculture by providing critical data and evidence, and insight and analysis, to and on behalf of the industry. With its expertise and insight relied upon by governments, advisory groups, researchers and academics and farmers and growers alike.

AHDB also provides evidence on the role of British red meat and dairy in a healthy and sustainable diet, showcasing its health and nutritional benefits and lower environmental impact to consumers.

University College Dublin - Institute of Food and Health

The UCD Institute of Food and Health brings together UCD academic staff with active research programmes in Food and Health into one Centre of Excellence. It is a multidisciplinary research institute dedicated to harnessing the expertise of its researchers to address the challenges faced by future food systems by supporting population and planetary health through providing the scientific evidence base for food systems policy, and innovation.

Led by Professor Eileen Gibney, the UCD Institute of Food and Health currently has over 60 faculty who with their research teams conduct research across its five themes: Food Safety and Integrity; Sustainable Food Production; Food Processing and Quality; Nutrition and Health; and Digitalisation of the Food Chain.

Through collaborations with industry, government agencies, and international research institutions, the UCD Institute of Food and Health strives to translate research findings into practical applications and solutions that benefit society.

Additionally, the Institute engages in outreach activities to disseminate its research findings to the public and contribute to evidence-based policies and interventions aimed at improving public health and ensuring a sustainable food system.

Queen's University Belfast (QUB)

Queen's University Belfast (www.qub.ac.uk) is an international centre of innovation and excellence, providing world-class education underpinned by world-class research. It is a member of the Russell Group of the UK's 24 top research-intensive universities. Research relating to food and nutrition spans between the Institute for Global Food Security (IGFS) and the Centre for Public Health (CPH) at Queen's University Belfast (QUB). The IGFS is one of four global research institutes at QUB established in 2014 to address key international challenges, in this case the future of the world's food systems. The Institute is ranked number 1 as part of the Research Exercise Framework 2021, with 94% of research in the areas for agriculture, food and veterinary sciences 'world-leading' or 'internationally excellent'. Research at CPH aims to advance the health of the public at a regional, national and international level, by increasing knowledge and influencing clinical and public health practice and policy. Collectively, research from IGFS and CPH enables explores the influence of diet across the lifecycle and the major nutritional challenges to support improved health and wellbeing of the human population. Focusing specifically on human nutrition research, QUB has extensive purpose-built research facilities to support this research with two centres focused on human nutrition research at the Centre for Public Health and at the School of Biological Sciences. Both inter-disciplinary research and active public engagement are actively encouraged within IGFS as part of a 'soil to society' approach.

The European Milk Forum (EMF)

The European Milk Forum (EMF) is a collection of national and regional dairy organisations from ten European countries - Austria, Belgium, Denmark, Germany, France, Ireland, Netherlands, Northern Ireland, Norway and Switzerland.

The organisations work together through EMF to build a clearer understanding of the role of milk and dairy products in healthy, sustainable diets across Europe and of dairy as part of European sustainable food production systems.

This includes science-based information initiatives on dairy and health and engaging in a dialogue with health and nutrition professionals.

Find more about EMF here: http://www.milknutritiousbynature.eu/home/

NutriPD

NutriPD is a National Forum funded project at ATU Galway. The project aims to grow professional competence in nutrition in Ireland, through the implementation of competencybased education in higher education institutions and the creation of a network of nutritionists to highlight issues facing the profession and advocate for the protection of the title. Our NutriPD Community of Practice (CoP) was established in May 2020 and now has over 150 members. The CoP brings together those with a key stake in nutrition education and employment to develop a network for sharing information and advocating for recognition of the registration process and Association for Nutrition (AfN) accreditation. We have members from all backgrounds in the nutrition field, including academic, research, industry, community nutrition, regulation, freelance, and more. Meetings take place during the academic calendar from September to June and participation in the network can count towards CPD hours for professional development.

Our work primarily focuses on supporting the nutrition community through the creation of professional development opportunities and connecting nutrition professionals across Ireland. We are always open to new members!

For more information, please check out our webpage www.NutriPD.eu or contact Sarah at sarah.odonovan@atu.ie

Randox Laboratories Ltd

Randox has been at the forefront of healthcare diagnostics for over 40 years, continually pushing the boundaries of what is possible in the industry. Our rich history of improving health outcomes worldwide is a testament to our commitment to innovation and cutting-edge science technologies. We believe that diagnostic testing plays a critical role in the healthcare industry, and our success is built on our unwavering dedication to advancing it. Our disruptive innovations, such as Biochip technology, have helped establish Randox as a world leader in the industry. Our product range includes open channel reagents, clinical chemistry and immunoassay analysers, quality controls, molecular diagnostics, point of care solutions, forensic toxicology, and food diagnostics. These products are a result of our commitment to science and our goal of improving health worldwide. We do not settle for the status quo but strive to innovate and develop cutting-edge products that can change the face of healthcare.

At Randox, we believe that research and development are crucial to the advancement of diagnostic testing. That is why we have an expanding team of top scientists and engineers dedicated to developing new technologies that can improve health outcomes worldwide. Our unwavering dedication to research and development has allowed us to push the boundaries of what is possible in healthcare diagnostics and bring about ground-breaking discoveries in

the industry.

Our commitment to innovation has not gone unnoticed, and we have received numerous awards and accolades for our pioneering work in personalised medicine, *in-vitro* diagnostics, and infectious disease testing. We are proud to be recognised as a trusted partner for healthcare professionals worldwide, and our focus remains on improving health outcomes worldwide through our cutting-edge products and services.

Learn more at: www.randox.com

Yoplait

Yoplait Since 1965, the brand affectionately known as 'the little flower' has been spreading French dairy know-how throughout the world. Our brands are present in more than 50 countries, and we are the world's second largest player in fresh dairy products. Pioneers of the dairy category for almost 60 years and launched in the UK in 1991 with iconic brands including Petits Filous, Frubes, Wildlife and Yop now a staple in UK homes. We were the first to launch fruit yoghurt, the first to launch a drinking yoghurt the first to launch yoghurt in a tube and we have been fortifying our products with calcium and vitamin D for over 15 years.

We are on a mission to bring more dairy goodness to children. We believe that children's nutrition in the UK is in a perilous state and, unless there is positive change, it will have serious repercussions for generations to come. Over 1 million kids are currently in danger of poor development and growth because they lack key nutrients such as vitamin D, calcium and iodine – all of which are present in fortified kids' yoghurt.

But consumption of kids' yoghurt is in decline. Why? Because kids have increasingly turned to biscuits and chocolate. Kids' yoghurt has also been wrongfully demonised for its sugar content with pressure groups lumping in our nutritious yoghurts with desserts and other highly processed foods. And there's a decline in people knowing the benefits of dairy. With so much noise around what to eat and what not to eat, it's hard for parents and kids to know what the right thing to do is.

As the market leader in children's yoghurt, it's not just our responsibility to be a positive voice for children's nutrition in the UK. It's our duty to act.

Association for the Study of Obesity

Founded in 1967, the ASO has become the UK's foremost charitable organisation dedicated to the understanding, prevention and treatment of obesity.

The ASO aims to develop an understanding of obesity through the pursuit of excellence in research and education, the facilitation of contact between individuals and organisations, and the promotion of action to prevent and treat obesity.

The ASO objectives:

- The promotion of professional awareness of obesity and its impact on health
- Educate and disseminate recent research on the causes, consequences, treatment, and prevention of obesity
- Prioritise obesity and provide opinion leadership in the UK
- Enhance understanding of the prevention and treatment of obesity throughout the UK
- Improve the quality of obesity education throughout the UK
- Forge links between individuals and organisations concerned with the study of obesity throughout the UK
- Support the role of patient and public involvement in obesity research
- Connect active researchers and practitioners from diverse disciplines who contribute to the development of a UK perspective on obesity.
- Provide appropriate input on the UK perspective at a European and international level through EASO and the World Obesity Federation.

The Association for Nutrition

The Association for Nutrition (AfN) is a registered charity and independent regulator of nutritionists.

The AfN was established for public protection, and achieves this through defining and advancing standards for safe and effective practice in nutrition. It sets standards for training, continuing professional development (CPD) and registrant's professional practice.

The AfN holds the UKVRN (United Kingdom Voluntary Register of Nutritionists) and awards the titles of Registered Nutritionist (RNutr) and Registered Associate Nutritionist (ANutr). The AfN provides guidance to support registrants to stay safe and effective in their practice and runs a fitness to practice process which benefits the public by holding professionals to account.

The AfN accredits scientific degrees in nutrition, both in the UK and internationally, as well as endorsing CPD activities and certifying training below degree level for those working and volunteering in the wider workforce.

National Dairy Council Ireland

The National Dairy Council (NDC) champions the role of quality, pasture-based dairy and its nutrition benefits in supporting healthier and more active living. We are a farmer-funded marketing agency and work to promote and protect Ireland's internationally-renowned dairy reputation. We believe in a future in which Irish dairy is recognised and trusted as an important part of people's diet, which adds value to Ireland's social and economic wellbeing.

The NDC promotes the recognition of the high-quality standards observed by farmers and producers, reinforcing their role as a trustworthy source of nutritious food. The NDC plays a vital role in leading a sustainable dairy industry with a strong focus on consumers and the role of dairy in their diet and lifestyles.

We strive to engage meaningfully with consumers, health-care professionals, media, schoolgoing children and dairy farmers through information resources, nutrition education, innovative campaigns and impactful events. All of our actions are built on a comprehensive understanding of dairy's role across the life-stages, supporting and using scientific data to answer important questions about dairy products and their role as part of a balanced diet. Two full-time nutritionists are employed to ensure that all NDC content is evidence based and aligned with the latest scientific research. This allows us to deliver effective marketing programs to develop consumer recognition of dairy's taste, versatility, natural and quality credentials.

NNedPro

The NNEdPro Global Institute for Food, Nutrition and Health is an award-winning, international, interdisciplinary and research-intensive thinktank anchored in Cambridge, with principal UK research hubs at Ulster University (School of Biomedical Sciences), Imperial College London (School of Public Health) and the University of Cambridge (School of Social Sciences). NNEdPro serves as an independent research organisation with solid education and training as well as knowledge network functions, operating digitally across ten regional networks across six continents, bringing together doctors, dietitians, nutritionists, other healthcare professionals, educators and researchers.

NNEdPro and its partners convene the International Academy of Nutrition Educators (IANE). This globally recognised virtual membership academy is dedicated to advancing nutrition education and research. Our mission is to provide professionals and organisations with the resources and support they need to develop and deliver high-quality nutrition education programmes while evaluating their impact on healthcare practices. With members in over 65 countries, IANE is a vibrant community that brings together individuals from diverse backgrounds who share a common passion for nutrition. Through IANE, we aim to deliver evidence-based education and training in nutrition. We offer capacity-building programmes and mentoring opportunities that empower tomorrow's trainers and researchers in related areas.

NNEdPro's flagship journal, the BMJ Nutrition, Prevention & Health is an open access, peerreviewed nutrition journal publishing the latest evidence-based research on the impact of nutrition and lifestyle on the health of individuals and populations. The journal publishes robust research on the key determinants of health including the social, economic, and physical environment, as well as lifestyle and behaviour. It provides physicians and other frontline health professionals with key information they can apply in daily practice.

Visit www.nnedpro.org.uk, www.iane.online and https://nutrition.bmj.com/ to learn more.

Myfood24

Founded by Professor Janet Cade, myfood24 was spun out of the University of Leeds in January 2017, with investment from the University's Enterprise Fund, to commercialise myfood24 and respond to a growing range of customer requirements.

Originally conceived in the School of Food Science & Nutrition and funded by a research grant (2012-2016) of £1m from the Medical Research Council, myfood24 is an online food diary developed to support research into diet-related disease, such as diabetes and cancer. Over time, we have expanded our horizons and introduced myfood24 for educational purposes, and more recently, we have unveiled a cutting-edge mobile app and web portal, catering to the healthcare sector.

Dairy Council for Northern Ireland

The Dairy Council for Northern Ireland (DCNI) acts on behalf of the dairy sector in Northern Ireland, communicating on the place of milk and dairy foods in a healthy, sustainable diet. DCNI provides science-based information to health and nutrition professionals, academics and nutrition students on the role of dairy foods as part of a healthy, sustainable diet. This includes organising events such as conferences, symposia and webinars on the latest nutrition science and research, particularly in relation to milk and dairy products, and making this information available through our website.

The DCNI 'Nutrition and Health - What's New?' conference and the Annual Dairy Council Nutrition Lecture at Ulster University are part of this, along with activities in the European Milk Forum's 'Milk, Nutritious by Nature' programme and our DCNI Sports Nutrition 'Milk It' programme.

The dedicated Nutrition and Health Professional section of the DCNI website contains the summaries and presentations from these events, together with scientific overviews of dairy and health topics. These include bone health, sustainable diets, cardiometabolic health, food matrix effects, muscle maintenance in older people and sports nutrition.

More information can be found at: www.dairycouncil.co.uk/health-professionals