



Microbiome-based Foods for Health and Sustainability
23 February 2016, Brussels

Speakers' bios

Fergus Shanahan, APC Microbiome Institute, University College Cork

Fergus Shanahan MD, DSc, is Professor and Chairman of the Department of Medicine and Director of the APC Microbiome Institute. The APC investigates host-microbe interactions in health and disease, now has a membership of over 160 staff, scientists, and students, and is funded in part by Science Foundation Ireland and by research alliances with indigenous and multinational companies within the food and pharmaceutical sectors. Prof. Shanahan attended medical school at University College Dublin. After internship and residency in internal medicine at the Mater hospital, he completed fellowships in clinical immunology at McMaster University, Canada, and in gastroenterology at University of California, Los Angeles (UCLA). At UCLA he rose to the rank of Associate Professor with tenure before returning to Ireland in 1993. Prof. Shanahan has published over 450 scientific papers and has co-edited several books. He has also published several essays on the medical humanities, including an award winning contribution on 'Waiting'. He is a Fellow of the Royal College of Physicians in Ireland, Canada, and the United Kingdom as well as of the American College of Physicians. He is a former President of the Irish Society of Gastroenterology, and in 2013 Science Foundation Ireland named him as its Researcher of the Year. His interests include mucosal immunology, gut microbiota, inflammatory bowel disease, and most things that affect the human experience.

Avril Doyle, former MEP

Avril Doyle is a former Member of the European Parliament (MEP) where she represented Leinster, Ireland from 1999 to 2009. In her early career, Doyle graduated with a B.Sc in Biochemistry from University College Dublin (UCD) in 1971. Following a period in regional politics, where she served as Mayor of Wexford, Doyle served as a member of both lower and upper legislative houses in Ireland from 1982 to 2002 (where she was Minister for State on two occasions: 1986-1987, 1995-1997). During the 5th and 6th parliamentary terms in the European Parliament, she was a member of the Committee on the Environment, Public Health and Food Safety (ENVI) and of the Industry, Research and Energy Committee (ITRE). Also during these two terms, Doyle served as a Member of the Temporary Committee on Climate Change (CLIM); Vice-President of the Delegation for relations with the Gulf States and Yemen; and Member of the Delegation for relations with China.

Kathleen D'Hondt, OECD

Trained as a molecular biologist, Kathleen D'Hondt obtained a PhD at the University Ghent, Belgium and pursued a research career before joining the department of Science and Innovation of the Flemish government (Belgium) in 2006 as a policy advisor. She is currently employed as a policy advisor at OECD in Paris in the secretariat of the Working Party on Biotechnology, Nanotechnology and Converging Technologies (BNCT) and focuses on new trends in biotechnologies and converging technologies.

Pamela Byrne, Food Safety Authority of Ireland

Dr Pamela Byrne holds a PhD in Environmental Toxicology from University College, Cork (UCC); an MSc in Aquatic Resource Management from Kings College, University of London; a BSc in Zoology from UCC and a Higher Diploma in Environmental Law from the University of Aberystwyth in Wales. Prior to taking up the position of CEO at the FSAI in March 2015, Dr Byrne held the role of Director of Regulatory Policy and Intelligence with Abbott Nutrition. Having previously held senior positions in the Ministry of Agriculture, Food and the Marine, she has extensive experience of the food regulatory environment, as well as expertise in risk assessment and food safety management at both national and international levels. During her time at the Ministry of Agriculture, Food and the Marine, Dr Byrne gained a deep knowledge of the food sector as an environmental toxicologist and risk assessor, and was instrumental in developing Ireland's research and innovation policy programmes in relation to food and the bio-economy. Dr Byrne also worked in the Cabinet of the European Commissioner for Research, Science and Innovation - Commissioner Maire Geoghegan-Quinn. Dr Byrne is the Chair of the Management Board of the Joint Programming Initiative A Healthy Diet for a Healthy Life. She is also the Chair of the Strategic Advisory Board of the Institute of Food and Health at University College Dublin, Ireland.

Colette Shortt, ILSI Europe

Professor Shortt is a science graduate of the National University of Ireland, Cork with post-graduate qualifications in nutrition (MSc, PhD) and a business qualification (MBA) from the School of Business Management, University of Surrey. As part of her post-graduate education, she has conducted nutrition research in Ireland, Canada and at the Rowett Research Institute, Scotland. She was one of the founding editorial board members of Trends in Food Science & Technology. Before joining Johnson & Johnson where she is currently Regulatory Director Emerging Science & Innovation, Consumer Global Franchise Organisation, she held a research nutrition position at SmithKline Beecham Consumer Healthcare and was Science Director at Yakult UK. Colette is a J&J Consumer Fellow, a Registered nutritionist and Fellow of the Association for



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Nutrition and the Royal Society of Medicine, a Visiting Professor to the Ulster University, former Chair of the International Sweeteners Association and on the board of the International Life Science Institute Europe.

Yolanda Sanz, Institute of Agrochemistry and Food Technology of the Spanish Council for Scientific Research

Yolanda Sanz is an expert in human microbiome research, with extensive contribution to elucidating the role the gut microbiota plays in pathogenesis and risk of diet-related disorders, including celiac disease, obesity and associated comorbidities. She has led 28 public and private research grants and currently coordinates the MyNewGut Project on human microbiome funded by FP7 (2013-2018).

Paulo Arruda, Instituto de Biologia, Universidade Estadual de Campinas

Paulo Arruda is Professor of the Department of Genetics at the Institute of Biology, State University of Campinas. He received his Ph.D. in Genetics from the State University of Campinas. His research interests are directed towards understanding the regulation of gene expression and its impact on amino acid metabolism and stress response. He is also interested in sugarcane biotechnology and microbiome. He was co-founder and Scientific Director of the plant biotechnology company Alellyx Applied Genomics.

Gerald Fitzgerald, APC Microbiome Institute, University College Cork

Gerald Fitzgerald is Professor of Food Microbiology, Head of the School of Microbiology and Deputy Director of the APC Microbiome Institute at University College Cork. He served as Interim Director of the industry-led Food for Health Ireland (FHI) research centre from its foundation until August 2009. FHI (funded jointly by Enterprise Ireland and industry partners) is a national consortium of four research institutions partnered with five major Irish dairy processing companies focused on deriving commercially viable functional ingredients from milk. His research interests span fundamental and applied aspects of the industrially important Lactic Acid Bacteria which are used in the production of fermented foods and probiotics, topics in which he has published over 250 peer reviewed papers. He was awarded a DSc by the National University of Ireland in 2006 for his published work. He was awarded the Royal Irish Academy National Commission for Microbiology Medal for excellence in research in 1995 and in 2010 he, together with his colleagues and collaborators (Profs Colin Hill and Paul Ross and Dr Catherine Stanton), was awarded the International Dairy Federation Elie Metchnikoff Prize in Microbiology.

Phil Hogan, European Commissioner for Agriculture and Rural Development

Prior to being nominated as Ireland's candidate for the European Commission, Phil Hogan served as Minister for the Environment, Community & Local Government from March 2011 until July 2014. Hogan was first elected to the Dáil (Lower House of Irish Parliament) in 1989 and regained his seat at each subsequent General Election. Between 1987 and 1989, he was a member of Seanad Éireann (Upper House of Parliament). He briefly served as Minister of State for the Department of Finance with special responsibility for the Office of Public Works between December 1994 and February 1995. He has held a number of spokesperson positions for his party, including on the Food Industry (1989-1991), Consumer Affairs (1991-1993), Regional Affairs & European Development (1993-1994), Enterprise, Trade & Employment (2002 onwards), Environment, Heritage & Local Government (2007-2011). He was Chairman of the Fine Gael (EPP) parliamentary party between 1995 and 2001. Hogan graduated from University College Cork (UCC).

Ciaran Mangan, European Commission, Directorate-General for Research and Innovation

Ciaran Mangan has 10 years' experience working as a research scientist in industry and over 20 years working as a DG Research programme and policy officer in the bioeconomy.

Stéphane Declerck, Université catholique de Louvain

Prof. Stéphane Declerck is head of the Laboratory of Mycology of the Earth and Life Institute of the Université catholique de Louvain, Belgium and the director of the mycothèque de l'Université catholique de Louvain (BCCM/MUCL), a fungal repository hosting 30,000 living filamentous fungi, yeasts and arbuscular mycorrhizal fungi. He also leads the Glomeromycota in vitro collection (GINCO), the world largest collection of arbuscular mycorrhizal fungi strictly cultured in vitro. His research expertise is on fungal biodiversity mostly in tropical ecosystems, plant-fungi interactions (symbiosis, endophytism, pathogenicity), study of trophic chain and agricultural impact of symbiotic organisms (e.g. abiotic and biotic stress resistance via fungi and microbial bioeffectors). He has been involved as coordinator and partner in more than 15 EU projects under INCO, EURATOM, FP6 and FP7 programs, dealing with the role of microorganisms in agricultural, industrial as well as natural environments.



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Ralf-Udo Ehlers, e-nema GmbH

Prof. Ralf-Udo Ehlers is a world-wide referent scientist in the area of entomopathogenic nematodes. He is the founder and Head of Research at e-nema GmbH (www.e-nema.de) which is a biotechnology company producing biological plant protection products based on entomopathogenic nematodes, bacteria, yeasts and fungi. In 2004 he was a guest professor UGent, Belgium. In 2005-2011 he was of Convenor International Organisation of Biological Control; WG. Insect Pathogens and Entomopathogenic Nematodes. He coordinated the EU REBECA Policy Support Action in 2006/2007. In 2009 he became a Prof. (apl) UKiel, Germany. He was an Executive Board Member Int. Biocontrol Manufacturers Association in 2013 and was President of the European Society of Nematologists. He received the Escherich Award of the German Society for General and Applied Entomology in 2015.

Marjeta Čandek Potokar, The Agricultural Institute of Slovenia

Graduated from the Biotechnical faculty of University of Ljubljana as zootechnical engineer in 1988 she began in the same year her career as a researcher at the Agricultural Institute of Slovenia where she is still working. In 1991 she finished an MSc (food science; Université Blaise Pascal, Clermont-Ferrand, France) and in 1997 she got her PhD (food science) at the Biotechnical Faculty (University of Ljubljana). Her main area of research is the quality of animal products (carcass, meat) as related to zootechnical factors. She has led many national projects and participated in many EU; presently she coordinates H2020 project Treasure. She is also pedagogically active, habilitated at the Faculty of Agriculture and Life Sciences of University of Maribor as a lecturer in field of technology of animal products. Current research topics comprise: (i) entire male issues (boar taint, immunocastration, nutrition, product quality), (ii) salt reduction in dry cured hams, (iii) developments in carcass classification, (iv) use of NIRS for meat quality assessment. She has authored over 60 peer-reviewed scientific papers, numerous professional articles, conference contributions and professional monographs.

Johan van Hylckama Vlieg, Chr. Hansen A/S

Dr Johan van Hylckama Vlieg is currently Senior Director Microbiome where is heading the microbiome innovation team and facility. He has 20 years of experience in gut microbiology, probiotics and food biotechnology in industry and academia leading teams in The Netherlands, France and Denmark. He is (co)author of more than 65 peer-reviewed publications and has presently an ISI h-index of 22 (ISI Google Scholar 30). He is inventor on 13 patents or patent applications.

Karl Fraser, AgResearch Limited

Dr Karl Fraser leads the Metabolomics project team at AgResearch, and has worked on a diverse range of projects, ranging from those related to forage based agricultural systems i.e. forage, meat and milk metabolomics, to biomarker discovery in the area of human health and nutrition. He has a wide range of experience in analytical chemistry and begun working in the area of metabolomics in 2005. He is the first or co-author of over 50 peer-reviewed publications across a broad range of topics including animal metabolism, meat and milk flavour, endophyte alkaloid analysis, and several metabolomic studies on plants, microbes and animal products.

Helen Roche, Institute of Food & Health, University College Dublin

Helen Roche is an Associate Professor Nutrigenomics, UCD Institute of Food & Health / UCD Conway Institute, School of Public Health, University College Dublin, Ireland. Roche leads the Nutrigenomics Research Group at the UCD Institute of Food & Health / UCD Conway Institute. Nutrigenomics uses state-of-the-art 'omics' technologies to gain a greater understanding of the molecular effects of nutrition on health. Her team has a specific interest in Personalised Nutrition. The core objective of her research is to determine different aspects of the interactions between nutrient stressors and inflammation within the context of obesity, insulin resistance and type 2 diabetes, using a variety of experimental approaches. She leads / is co-PI within several national and international research projects including Science Foundation Ireland (SFI) Principal Investigator programme determining the molecular interactions between dietary stressors and inflammation within the context of obesity and insulin resistance; Teen Nutrition Study PI funded by the National Children's Research Centre which is investigating the effect of novel anti-inflammatory bioactives on diabetes and cardiovascular risk in obese adolescents; Nutritional Solutions for Healthy Ageing PI funded by the Department of Agriculture and Food, Food Institutional Research Programme; Immuno-Met, in collaboration with UCC/APC, which is investigating the interaction between the microbiome and adipose tissue health, funded by the Department of Agriculture and Food, Food Institutional Research Programme; Food for Health Ireland (www.FHI.ie) co-PI funded by Enterprise Ireland which is identifying novel functional ingredients derived from milk; Food4Me which was focused on Personalised Nutrition and NuGO The European Nutrigenomics Organisation Network of Excellence; Joint coordinator of the EU FP6 LIPGENE project, managing the Human Nutrition / Nutrigenomic component. LIPGENE determined the effect of genetic background and dietary fatty acid intake on insulin sensitivity in the Metabolic



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Syndrome. She is also a SAB Chair (2015-present) and the Scientific Advisory Board Member (2012-present) of the EU Healthy Diet Healthy Life Joint Programming Initiative.

Joan Vermeiren, Cargill R&D Centre Europe

Dr ir Joan Vermeiren holds a MSc and PhD in Bioscience Engineering. She works as Senior Nutrition Scientist in the department of Global Food Research at the Cargill R&D Centre Europe. In this role she is project manager of research projects focusing on the impact of innovative food ingredients on the microbiome and human health.

Guus Roeselers, Danone - Nutricia Research

Dr Guus Roeselers received his PhD in Environmental Biotechnology in 2007 at Delft University of Technology, the Dutch cradle of microbiology. Subsequently, he moved to the US for postdoc research at Harvard University. There he stayed several years conducting research on various microbial ecology topics including symbioses between gutless marine invertebrates and sulfur oxidizing bacteria. In 2010 he joined TNO. Here, he was involved as a senior scientist in applied research focused on the mammalian gut microbiota in relation to health. Roeselers recently joined Danone Nutricia Research to lead the Gut Microbiology research team which studies interactions between health, nutrition and the intestinal microbiome during the very early phases of human life. Roeselers is chair of the Microbial Ecology section of the Royal Dutch Society for Microbiology. He has (co)authored more than 30 scientific publications.

Paul O'Toole, APC Microbiome Institute, University College Cork

Following industry and academic positions in Sweden, Canada, New Zealand and the US, Paul O'Toole is now Professor of Microbial Genomics at University College Cork, Ireland. His main research theme is the genomics of gastrointestinal bacteria in humans with emphasis on commensal species and host interaction. In recent years he has co-ordinated and participated in several major projects that examine the composition and function of the gut microbiota, its interaction with habitual diet, and its relationship to health, functional gastrointestinal disorders, and aging. The ultimate aim of these investigations is to develop novel therapeutics, foods and food ingredients to programme the intestinal microbiota towards promoting health. He co-ordinated ELDERMET (eldermet.ucc.ie), a nationally funded project that established diet-microbiota health interactions in 500 elderly persons, and he leads a project called ELDERFOOD that is investigating dairy-derived foods for healthy aging. He is a Principal Investigator in the APC Microbiome Institute, in which he leads projects on microbiota in aging, and lactobacillus genomics. He leads the metagenomics workpackage in NuAge, an EU FP7 project on microbiota in the elderly that is anchored by University of Bologna. He is a partner in MyNewGut, another FP7 project on gut microbiota, diet and behaviour in infants anchored by CSIC Valencia. As well as national and European agencies, his lab in Cork is also supported by the US NIH (oral microbiome and childhood caries; anchored by NYU). He has published over 150 articles and has an H-index of 38 (Web of Science). He has delivered >200 conference presentations.

Barry O'Sullivan, Insight Centre for Data Analytics, University College Cork

Professor Barry O'Sullivan is the Director of the Insight Centre for Data Analytics at University College Cork. He is a Full Professor (Chair of Constraint Programming) in the Department of Computer Science at University College Cork. Prof. O'Sullivan is a Fellow and board member of the European Coordinating Committee for Artificial Intelligence, the world's largest artificial intelligence society, and a Senior Member of AAAI, the Association for the Advancement of Artificial Intelligence. He was the longest serving President of the international Association for Constraint Programming until 2012; he received the association's Distinguished Service Award for that leadership. He also won UCC's Leadership Award in 2013. Prof. O'Sullivan has been involved in winning more than €140 million in research funding, of which approximately €25 million has directly funded his research at UCC. Professor O'Sullivan is an editor of Springer's book series on "Artificial Intelligence: Foundations, Theory, and Algorithms", and serves on the editorial board of a number of international artificial intelligence journals.

Keith Baker, Philips Applied Technologies

Keith Baker is the Director of Open Innovation at Philips Applied Technologies. He developed the role of Philips Applied Technology as a hub of open innovation at regional and EU level and is the serial project leader for Eureka projects in the consumer electronics domain. Since 2013 he has been the Public Finance Director for Consumer Lifestyle which Supports Philips efforts to exploit open innovation in conjunction with aid from public authorities in programmes such as EIT KICs, Eureka-JTIs, Horizon2020, regional programmes with local partners and international programmes to engage China and other BRIC in innovation with a strong market. Keith became a committee member of the Work Group 5 Smart Home and Ageing and WG 7 Wearables in the EU Alliance of Internet of Things Initiatives (AIOTI). As an expert on the issues related to of



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the EU policy within H2020 for 2 Health Life Years, he contributed to policy priorities of both working groups to ensure that the whole EU population can be assured on two extra health life years per decade using IoT, health data and genomic analytic.

Declan Kirrane, ISC Intelligence in Science

Declan Kirrane is the Chairman and Managing Director of ISC. His expertise covers IP, R&D consortia development, management and dissemination in areas such as ICT, health, security, defence, space and related policies, legislation, programmes and funding mechanisms. Prior to ISC he was responsible for the dissemination of the European Union's Framework Programme for Research and Technological Development and Demonstration (FP). Kirrane has a background in analysing the relationship between public and private R&D investment and the impact on R&D performance. He has worked extensively on science policy evaluation methodologies and technology options for policy and decision makers. He was the contractor that established the CORDIS News Service for the Commission in 1994 and has edited CORDIS focus and Innovation and Technology Transfer Newsletter, both published by the European Commission. He is a graduate of University College, Dublin and the Dublin Institute of Technology.

Colin Hill, APC Microbiome Institute, University College Cork

Colin Hill is Professor of Microbial Food Safety in the School of Microbiology and also a Principal Investigator in the APC Microbiome Institute at University College Cork, Ireland. His main interests are in infectious disease, particularly in defining the mechanisms of virulence of foodborne pathogens and in developing strategies to prevent and limit the consequences of microbial infections in the gastrointestinal tract. He is also interested in the role of bacteriocins and bacteriophages as agents to limit the growth of bacteria in food or in the human gut. In 2005 Prof. Hill was awarded a DSc by the National University of Ireland in recognition of his contributions to research. In 2009 he was elected to the Royal Irish Academy and in 2010 he received the Metchnikoff Prize in Microbiology and was elected to the American Academy of Microbiology. He has published more than 400 papers and holds 14 patents. He was President of ISAPP (International Scientific Association for Prebiotics and Probiotics) from 2012-2015.

Barend Verachtert, European Commission, Directorate-General for Research and Innovation

Barend Verachtert is the acting Head of the Agri-Food chain Unit in the Research and Innovation Directorate-General (DG RTD) of the European Commission. The unit is in charge of the development and implementation of research and innovation policies in the context of the Food Research Area and Horizon2020. Over the last 5 years, he has held various positions within DG RTD in the field of the bioeconomy. Until recently he was the interim Executive Director of the Bio-based Industries Joint Undertaking, a public-private partnership. Previous assignments in DG RTD included the SME unit in charge of the development of SME research policies and the promotion of SME participation in FP6 and FP7, and the Food Quality and Safety unit. Before joining the European Commission in 1998, he was a technology acquisition manager for Plant Genetic Systems NV, a Belgian plant biotechnology company. He obtained a PhD in biology from the University of Leuven (1988).

Jordi Estellé, INRA

Jordi Estellé (DVM, PhD) is research scientist at the "Génétique Immunité Santé" team of GABI (INRA). He has extensive experience in molecular and computational biology applied to animal genetics and genomics and on the analysis of NGS data. His current research targets the characterization of the genetic factors influencing the porcine immune response and robustness, with an integrative biology approach that includes the analysis of the gut microbiota.

John Benzie, University College Cork and WorldFish

John Benzie has more than 25 years' experience in aquaculture and marine science working in the government, university and private sectors. He has led national and international R&D programs in Europe, Australia, North America and Asia, directed a Marine Centre at the University of New South Wales and R&D for a multinational shrimp breeding company. He is currently Professor of Marine Molecular Biodiversity at University College Cork, Ireland, and leads the genetics programs in Africa and Asia for the CGIAR Research Centre WorldFish focused on developing sustainable nutritional solutions for those regions.

John T. O'Sullivan, BioAtlantis Ltd.

John T. O' Sullivan is the founder and CEO of BioAtlantis Ltd. (est. 2004), an Irish-based biotechnology company which manufacture natural bioactives derived from botanical resources for modulating defence, immunity, microbiota for plant, animal and human health. O'Sullivan entered the food industry in 1989 and became Operations Manager of the Proteins Division of Kerry Ingredients in 1994, part of the global Kerry Group PLC. In this role he was manager of milk separation, casein and whey protein separation and lactose production. He led a team to



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reduce energy usage, minimize raw material/process losses and improve quality. He was also responsible for installation of equipment to separate key components on the basis of molecular size and ionic charge. From here, O'Sullivan transitioned to Kerry Algae and setup BioAtlantis Ltd. in 2004. In the last 10 years he has driven BioAtlantis to be a key player in the biostimulant industry worldwide with an annual growth rate of 45% per annum since 2007, while putting the foundations in place to be a high growth company with integrity and product excellence as the fundamentals. Since the foundation of the company, he has focused R&D efforts on plant physiology, monogastric health and immunity. This has involved extensive collaborations with universities in Ireland and Europe between 2005 and present. Over 35 peer-reviewed papers have since been published on the efficacy of bioactives and nutraceuticals manufactured by BioAtlantis, including those extracted from seaweeds. The company has three patents filed, two of which are granted on animal and human health. They also coordinated THRIVE-Rite (2012-2015) an EU FP7 project aimed at enhancing pig and poultry animal production. The company was also a partner in Biofactor another FP7 project (2007-2013) which focused on reducing the input of mineral fertilisers in European agriculture by development of specifically adapted bio-effectors (BEs) to improve the efficiency of alternative fertilisation strategies.