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Celebrating 10 years of nutrition education, research and innovation



NNEdPro Global Centre for Nutrition and Health



Summer School in Applied Human Nutrition Candidate Handbook



*Wolfson College
Cambridge
July 14th - 18th 2018*

Welcome to the NNEdPro Global Centre for Nutrition and Health. We are anchored in Cambridge (UK) and work closely with local, regional and international partners. As a not-for-profit global think-tank, training academy and knowledge network (including a research lab consortium), we provide a gateway to individuals and organisations interested in opportunities to improve nutrition and health via education, research, evaluation and advocacy. Established as a University-based project group in 2008, we were subsequently hosted in a UK Medical Research Council facility for several years, before being constituted as an independent non-government education and research organisation, retaining formal University affiliations. Our aim is to improve nutrition-related health outcomes by training professionals, strengthening research, implementing solutions and addressing inequalities, in line with the United Nations' Sustainable Development Goals and the Decade of Action on Nutrition 2016-2025. We are delighted to celebrate our 10th anniversary with you this year at our Summer School and International Summit.

Our principal hubs are in Cambridge, London, Ulster and Parma. Our international networks, including regional hubs, extend from North America, through Africa and South Asia to Australasia. We work via strategic partnerships and key collaborations, connecting both individuals and institutions through membership of our academy as well as our formalised networks.

We have key affiliations with academic institutions, including the University of Cambridge, through which we deliver flagship educational courses and actively undertake collaborative research, particularly via senior academic appointments held by our leadership. Our group also holds associate membership of Cambridge University Health Partners and our base for international scholarly exchange is Wolfson College Cambridge. Additionally we have important affiliations with Imperial College London, Ulster University and the University of Parma. We are also closely allied with specialist organisations, such as Global Open Data for Agriculture and Nutrition (GODAN) as well as the British Dietetic Association, which provides access to Dietetic expertise, overall business support and governance oversight to our operations. Further strategic partnerships with specialist organisations include Nutrition in Medicine, the Society for Nutrition Education and Behaviour and the LGC Group.



The Lee Library, Wolfson College

Birds-eye view of Wolfson College



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**NNEdPro Global Centre for
Nutrition and Health**

*Advancing and implementing nutrition knowledge
to improve health, wellbeing and society*

Celebrating 10 years of nutrition education, research and innovation

INTRODUCTION

Dear Summer School Participants

It is with the utmost pleasure that we welcome you here to Cambridge for the third annual NNEdPro Summer School taking place in July 2018.

The Summer School delivers a foundation level certificate in Applied Human Nutrition for those interested in health and biological sciences and will cover basic concepts in nutrition but will also delve into contemporary and cutting-edge topics such as the Mediterranean Diet and Diet-Microbe Interactions. Each session has been carefully chosen to provide participants with adequate training while also aiming to promote further study and interest upon completion of the course.

The Summer School will equip you with the basic knowledge needed to implement nutritional change in your work context and more broadly. Learning will not end after five days however - once the final assessment has been completed, participants of the Summer School will receive membership of the International Academy of Nutrition Educators (IANE) for one year. This will provide each of you with a limited amount of continued mentoring and opportunities to further advance your career in various aspects of nutrition. The Summer School is followed immediately by the NNEdPro International Summit which presents an unparalleled opportunity for participants to interact with key opinion leaders from across the world.

We hope that you take this opportunity to learn and challenge yourself, embracing the academic excellence which underpins so much of what makes Cambridge a world renowned centre of learning.

Good luck and make sure to enjoy the experience!

With very best wishes,

Organising Committee of the NNEdPro Cambridge Summer School 2018

BOARD OF DIRECTORS



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NNEdPro Founding Chair & Executive Director
Summer School
Course Director



Pauline Douglas, RD
NNEdPro Vice Chair & Education Director
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BMJ NUTRITION PREVENTION AND HEALTH



Prof Martin Kohlmeier
Joint Course Director
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Prof Daniele Del Rio – *Parma University*

BMJ Nutrition, Prevention and Health

Prof Martin Kohlmeier – *University of North Carolina*

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Karen Chamberlain – *Medical Research Council*

Ananya Ria Roy – *The Heart of the City London*

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James Bradfield – *University College Cork | University of Chester*

Eden Barrett, APD – *University of Wollongong | University of Cambridge*

Shivani Bhat, MPH – *University of Limerick*

Dr Harrison Carter – *University of Bristol*

Dr Glenys Jones, RNutr – *Association for Nutrition*

Dr Francesca Ghelfi – *European Institute of Oncology*

Dr Giuseppe Grosso – *University of Catania*

Dr Rajna Golubic – *University of Cambridge*

Celia Laur, RNutr – *University of Waterloo*

Dr Síle Griffin – *DuPont Nutrition & Health*

Special thanks:

Matt Harvey (Photography)

Wolfson College Cambridge (Conferencing)

Disclaimer: Key institutional affiliations of the organising committee are included for information. However, all members of the organising committee provide input to the Summer School in an individual capacity and their opinions do not necessarily reflect the opinions of the institutions with which they are primarily affiliated.

SUMMER SCHOOL OBJECTIVES

The overall objectives of the NNEdPro summer school are to provide the following:

- An introduction to key diet and nutrition concepts.
- A general overview of key concepts in nutrition and disease prevention.
- An outline of public health nutrition, practice and policy using worked examples.
- Key points from healthcare related nutrition and hydration practices and the impact of advice/interventions on populations and individuals.
- Exposure to a range of tools and frameworks that can be used to critically appraise and apply knowledge from the current evidence base in nutrition and hydration.

EDUCATIONAL QUALITY ASSURANCE

NNEdPro's foundation certificate course in Applied Human Nutrition has run annually since 2016 and is composed of the sum total of two separate modular courses, Generic Nutrition Training (GNT) and Nutrition/Hydration Education and Leadership for Improved Clinical Outcomes (NHELICO), previously and separately endorsed by Cambridge University Health Partners (CUHP). Given NNEdPro's formal affiliations with CUHP and the British Dietetic Association (BDA), assuring high quality evidence-based educational content is at the heart of course development and delivery.

In addition, Continuing Professional Development (CPD) has been received from the Royal Society for Biology and the Royal College of Physicians, particularly for the benefit of clinically qualified candidates and those from the biological sciences or related fields.

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Day 1 - Core Concepts in Human Nutrition - Saturday July 14th

Time	Topic	Speaker
08.45 - 09.10	Registration and Introduction	
09.10 - 09.20	Official Welcome	The Lord Balfe of Dulwich
09.20 - 10.00	Introduction to Diet and Nutrition	Sumantra Ray & Pauline Douglas
10.00 - 10.30	Dietary Assessment Methods	Glenys Jones
10.30 - 11.00	Body Composition and Energy Metabolism	Mei Yen Chan
11.00 - 11.15	Break	
11.15 - 11.50	Practical Workshop: Anthropometry and Bioimpedence Methods	James Bradfield, Rachel Keane & Eden Barrett
11.50 - 12.30	Introduction to Macronutrients*	Michelle Venables (video)
12.30 - 13.30	Lunch	
13.30 - 14.20	Introduction to Micronutrients	Caryl Nowson
14.20 - 14.40	Case Study on Micronutrients	Dora Pereira
14.40 - 15.20	Introduction to Nutrition and Non-Communicable Diseases & Nutrition and Cardiometabolic Disease*	Caryl Nowson & Sumantra Ray
15.20 - 15.35	Break	
15.35 - 16.15	Diet and Fatty Liver: A Case Study	Michele Vacca
16.15 - 16.30	Summary of Day 1	Sumantra Ray & Pauline Douglas

*Targeted reading list:

<https://www.bmj.com/content/361/bmj.k2234>

<https://www.bmj.com/content/361/bmj.k2139>

<https://www.bmj.com/content/361/bmj.k2340.abstract>

Candidates will have the opportunity to meet with their mentors in small groups and 1:1 upon completion of Day - 1 and at further junctures.

Day 2 - Nutrition Research Methods - Sunday July 15th

Time	Topic	Speaker
09.00 - 09.45	Introduction to Study Design & Quantitative Methods in Nutrition	Sumantra Ray & Rajna Golubic
09.45 - 10.20	Introduction to Qualitative Methods in Nutrition	Shivani Bhat, Glenys Jones & video from Celia Laur
10.20 - 11.00	Introduction to Nutritional Epidemiology	Fumiaki Imamura
11.00 - 11.15	Break	
11.15 - 12.00	Critical Appraisal Mini-Workshop	Francesca Ghelfi & Harrison Carter
12.00 - 12.30	Nutritional Interventions: the Case of Metabolomics	Pedro Mena
12.30 - 13.00	Study Design in Line with EFSA Requests for Health Claims	Daniela Martini
13.00 - 14.00	Lunch	
14.00 - 14.45	New Frontiers in Human Nutrition Research: An Overview of Nutrigenetics & Nutrigenomics	Martin Kohlmeier
14.45 - 15.45	Mediterranean Diet Beyond the Mediterranean Shores	Gabriele Mocciaro & Simon Poole
15.45 - 16.00	Break	
16.00 - 16.30	Nutrient Quality & Health: Impact of Carbohydrate Quality on Human Health - News from the Research Front	Francesca Scazzina
16.30 - 17.15	Diet-Microbe Interactions in the Gut: Effects in Human Health & Disease	Daniele del Rio
17.15 - 17.30	Summary of Day 2	Daniele del Rio & Harrison Carter

Day 3 - Nutrition in Healthcare - Monday July 16th

Time	Topic	Speaker
09.00 - 09.05	Introduction to Nutrition/Hydration Education & Leadership for Improved Clinical Outcomes (NHELICO) - Part 1	Sumantra Ray
09.05 - 09.40	Nutritional Screening & Assessment in Healthcare	Eleanor Beck
09.40 - 10.25	Hydration & Health in Primary Care	Pauline Douglas
10.25 - 11.00	Fluids & Electrolytes in Acute Care	Minha Rajput-Ray
11.00 - 11.15	Break	
11.15 - 12.10	Managing Undernutrition & Nutritional Support in Acute Care	Lisa Sharkey
12.10 - 13.00	Managing Obesity in Acute Care	Sumantra Ray
13.00 - 14.00	Lunch	
14.00 - 14.45	Nutrition & Cancer Prevention	Francesca Ghelfi
14.45 - 15.00	Continuation of NHELICO - Part 2 (including case studies)	Sumantra Ray
15.00 - 16.00	Nutrition in Ageing	Caryl Nowson
16.00 - 16.15	Break	
16.15 - 16.45	Nutrition in Disability Management & Occupational Wellbeing	Minha Rajput-Ray
16.45 - 17.00	Summary of Day 3	Sumantra Ray & Pauline Douglas

Day 4 - Nutrition, Public Health & Policy - Tuesday July 17th

Time	Topic	Speaker
09.00 - 09.30	The Global Nutrition Report & UN Decade of Action on Nutrition	Sumantra Ray
09.30 - 10.00	Global Evidence in Nutrition	Giuseppe Grosso
10.00 - 10.30	Scope of Public Health Nutrition: Case studies	Shivani Bhat, Harrison Carter & James Bradfield
10.30 - 11.00	Nutrition, Public Engagement & Policy Formulation	Glenys Jones
11.00 - 11.15	Break	
11.15 - 11.45	Role of Nutritional Supplements in Population Health	Peter Van Dael
11.45 - 13.00	Practicum in Precision Nutrition (Testing kits)	Martin Kohlmeier & Harrison Carter
13.00 - 14.00	Lunch	
14.00 - 15.00	Blended Learning Interactive Section/Quiz	Eleanor Beck, Sumantra Ray & Pauline Douglas
15.00 - 15.30	Course Summary	Sumantra Ray & Martin Kohlmeier
15.30 - 16.30	Mentoring time	Mentor & Candidates

Day 5 - Assessment - Wednesday July 18th

Time	Topic
14.00 - 15.30	<p>Mentors for our candidates at the Summer School will have about 5 candidates each & will provide a limited amount of support to candidates during the course particularly for formative pieces of work.</p> <p>Candidates have the following assessed pieces of work to complete. Day 1 – Practical Workshop Day 2 – Critical Appraisal Day 3 – Essay to be submitted before the beginning of day 3 Day 4 – Interactive Quiz Day 5 – Final Exam (1.5hrs)</p>
15.30 - 16.00	Break
16.00 - 17.00	<p>Session by Global Open Data for Agriculture and Nutrition (GODAN) <i>Importance of Open Data Systems for Agriculture & Nutrition</i> <i>(non-examinable)</i> <i>Facilitated by Nida Ziauddeen</i></p>

Evening Programme

Saturday July 14th	Walking tour of Cambridge and a Visit to the famous Eagle public house (Organised & pre-paid by NNEdPro)
Sunday July 15th	Punting on the River Cam (Signposted by NNEdPro - tickets to be purchased by individuals)
Monday July 16th	Formal Gala Dinner at Wolfson College - Cambridge University (Included within registration)
Tuesday July 17th	Preparation for assessment

COURSE OUTLINES *(in order of lecture)*

INTRODUCTION TO DIET AND NUTRITION

Sumantra Ray and Pauline Douglas

This introductory session will provide a historical overview of diet and nutrition, outlining definitions, classifications and nomenclature as well as describing some of the fundamental scientific underpinnings of Diet and Nutrition, including key interfaces with Health and Disease.

DIETARY ASSESSMENT METHODS

Glenys Jones

This session will provide an introduction to dietary assessment and will include:

- the different dietary assessment methods available, prospective and retrospective
- the advantages and challenges of using different methods
- basic techniques and methods for collecting dietary intake
- basic methods for managing and coding dietary intake data
- an introduction to food composition

BODY COMPOSITION AND ENERGY METABOLISM

Mei Yen Chan

This session will provide an overview of how nutrition influences body composition and energy metabolism. At the end of the session participants will be able to:

- Describe the key components of energy expenditure and have an understanding of how nutrient intake can influence energy balance.
- Explain how body composition is measured using a variety of methods and techniques including densitometry, bioelectrical impedance, dual energy x-ray absorptiometry and other anthropometric techniques.
- Explain the relationship between body composition and disease risk.
- Discuss how nutrition intervention strategies can be used to improve of body composition and subsequent health outcomes at individual and population levels.

ANTHROPOMETRY AND BIOIMPEDANCE METHODS

James Bradfield, Rachel Keane and Eden Barrett

Demonstration of Tanita scales and brief explanation of the principles of bioelectrical impedance analysis. Opportunity for participants to measure their own body composition using the Tanita scales.

INTRODUCTION TO MACRONUTRIENTS

Michelle Venables (video)

The aim of this short talk is to introduce the concepts involved in the digestion and absorption of macronutrients. Descriptions of the anatomical structures and functions of the gastrointestinal tract will be given alongside an introduction to the macronutrients: carbohydrate, fat and protein and the processes involved in their digestion and absorption.

COURSE OUTLINES *(in order of lecture)*

INTRODUCTION TO MICRONUTRIENTS

Caryl Nowson

The aim of this talk is to introduce the physiological function, dietary and other sources as well as population and individual approaches to ensuring micronutrient adequacy. In addition, candidates should have an understanding and be able to describe specific dietary challenges relating to ensuring sufficient status at critical time periods throughout the life course and population/fortification approaches to address micronutrient deficiencies for vitamins A and D, iodine, iron and folate.

CASE STUDY ON MICRONUTRIENTS

Dora Pereira

Iron deficiency anaemia (IDA) is the largest nutritional deficiency disorder worldwide and one of the 5 leading causes of global disease burden. In spite of many successes, IDA remains the leading cause for years lived with disability (YLDs) in low-middle income countries, and it is clear that more needs to be done to eliminate this form of malnutrition in resource-poor settings. One challenge has been the fact that it is not trivial to replenish body iron levels in populations with high infection or inflammation burden. Iron nutrition is closely interlinked with innate immunity and hypoferraemia is a primitive defensive mechanism in humans which evolved to minimise iron availability to pathogens. This means that iron bioavailability is low in those with infection or inflammation. The second challenge is that iron deficiency and anaemia are protective against malaria and other co-infections and unsupervised iron supplementation programmes can remove this protection. Equally, unabsorbed 'free' iron in the colon is a major modulator of the gut microbiome and of enteric infection risk. Lastly, there is a generalised lack of understanding of the multifactorial nature of anaemia and an underestimation of the importance of iron nutrition between governments, clinicians and NGOs. New strategies are urgently needed if we are to make a significant impact in decreasing the burden of this deficiency and achieving the SDGs.

INTRODUCTION TO NUTRITION AND NON-COMMUNICABLE DISEASES & NUTRITION AND CARDIOMETBOLIC DISEASE

Caryl Nowson & Sumantra Ray

This session will start with a broad overview of Nutrition and its contribution to the Global Burden of Disease, particularly via Non Communicable Diseases, such as Cardiovascular Disease, Diabetes, Hypertension and Cancer. This will be followed by a specific focus on Hypertension in relation to the burden of disease, nutritional factors that alter blood pressure, particularly sodium and individual and population approaches to reduce hypertension.

DIET AND FATTY LIVER: A CASE STUDY

Michele Vacca

There are more than 500 vital reasons why we should preserve liver function. The plan of the presentation include:

- What is fatty liver and why it is important for metabolic diseases
- Where hepatic fat comes from and why nutrition is important
- Why and how NAFLD progresses toward chronic liver disease

COURSE OUTLINES *(in order of lecture)*

INTRODUCTION TO STUDY DESIGN AND QUANTITATIVE METHODS IN NUTRITION

Sumantra Ray and Rajna Golubic

This session will be based on the research methods toolkit, the Oxford Handbook of Clinical and Healthcare Research (Editor – S Ray; associate Editor; R Golubic). Key elements outlined:

- Research - How and Why?
- Basic concepts in biostatistics and epidemiology
- Quantitative and clinical / epidemiological methods

INTRODUCTION TO QUALITATIVE METHODS IN NUTRITION

Shivani Bhat, Glenys Jones & Celia Laur (video)

This session will aim to:

- Provide an overview of the rationale for using qualitative research, and examples of how this has advanced scientific understanding of topics
- Provide an overview of common methodological approaches to qualitative research, including semi structured interviews and focus groups
- Provide an overview of leading qualitative analysis methods for health research, including thematic and content analysis

INTRODUCTION TO NUTRITIONAL EPIDEMIOLOGY

Fumiaki Imamura

This session will aim to cover the following:

- Epidemiology – definition, roles in society (descriptive studies [surveys]; aetiological studies [hypothesis generation and hypothesis testing])
- Examples of nutritional epidemiological studies – with different dietary assessment methods, different study designs, biomarkers, advanced approaches
- Evidence synthesis – meta-analysis of trial and observational evidence and policy implication.

CRITICAL APPRAISAL MINI-WORKSHOP

Francesca Ghelfi & Harrison Carter

This session will aim to equip candidates with the tools needed to critically analyse and interpret recent research findings and their implications.

NUTRITIONAL INTERVENTIONS: THE CASE FOR METABOLOMICS

Pedro Mena

The aim of this talk is to introduce the use of metabolomics approaches in nutritional studies. The role of metabolomics in nutritional interventions, consumer stratification, and population phenotyping will be discussed. The workflow of a nutritional metabolomics study will be presented. Their implications in the identification of biomarkers of intake and biomarkers of effect will also be considered.

COURSE OUTLINES *(in order of lecture)*

STUDY DESIGN IN LINE WITH EFSA FOR HEALTH CLAIMS

Daniela Martini

The aim of this talk is to give an overview about health claims in the European scenario. Particular emphasis will be given to how to apply for a new health claim, based on the Guidance provided by the European Food Safety Authority, mainly focusing on the scientific part of the request.

NEW FRONTIERS IN HUMAN NUTRITION RESEARCH: AN OVERVIEW OF NUTRIGENETICS AND NUTRIGENOMICS

Martin Kohlmeier

The obvious complexity of these many gene-nutrient interactions should not prevent us from taking a good look at what we already know and ask about the utility of each interaction one by one. Reliable genomic testing has recently become affordable and the evidence base for gene-food interactions is steadily expanding. The challenge now is to combine both elements into effective precision nutrition practice. Health care providers have to be familiar with the molecular mechanisms underlying differing responses to nutrition challenges and with specific applications that work best with each individual's genomic blueprint.

This presentation will highlight, therefore, how our growing understanding of the discipline can help professionals and consumers to make sense of the many different gene-food interactions and inform them about good nutrition choices in light of available genomic information.

MEDITERRANEAN DIET BEYOND THE MEDITERRANEAN SHORES

Gabriele Mocciaro and Simon Poole

This session will aim to cover:

- Epidemiology of chronic diseases;
- Landmark studies on Mediterranean Diet (MD) and Health
- What does a good Mediterranean diet (MD) mean?
- Focus on Extra virgin olive oil
- Does a Mediterranean-type dietary pattern exert a cardio-protective effect outside the Mediterranean region?

NUTRIENT QUALITY AND HEALTH: IMPACT OF CARBOHYDRATE QUALITY ON HUMAN HEALTH – NEWS FROM THE RESEARCH FRONT

Francesca Scazzina

This session will aim to cover the following:

- Importance of carbohydrates in the human diet
- Nutritional evaluation of carbohydrates
- Postprandial glycaemia
- Glycaemic Index and Glycaemic Load
- Insulin Index, new Index, and human health

COURSE OUTLINES *(in order of lecture)*

DIET-MICROBE INTERACTIONS IN THE GUT - EFFECTS IN HUMAN HEALTH AND DISEASE

Daniele Del Rio

A peculiar interaction with the human gut microbiota is with dietary polyphenols, which are plant secondary metabolites present in relevant concentrations in foods such as tea, cocoa, fruits and vegetables, and have been associated with several beneficial health effects in epidemiological and intervention studies. The intact forms of complex dietary polyphenols all share a very scarce bioavailability and a large proportion of ingested polyphenols pass to the large intestine, where substantial structural modifications are mediated by the colonic microbiota. The resultant low-molecular-weight compounds may be absorbed and circulate in the body prior to excretion in urine in amounts that greatly exceed those of metabolites absorbed in the small intestine, whose concentration in plasma rarely exceeds the nmol/l levels.

This lecture will deal with general diet-microbe interaction in the gut, but will also focus on the complex colonic microbial metabolism undergone by dietary polyphenols and describe the most recent advancements in the study of polyphenol biological activity in the light of these newly investigated chemical modifications.

INTRODUCTION TO NUTRITION/HYDRATION EDUCATION AND LEADERSHIP FOR IMPROVED CLINICAL OUTCOMES (NHELICO)

Sumantra Ray, Eleanor Beck, Pauline Douglas & Minha Rajput-Ray

This session is a series of rotational workshops covering the following:

- Nutritional Screening and Assessment in Health Care
- Hydration and Health in Primary Care
- Fluids and Electrolytes in Health and Disease
- Managing Undernutrition and Nutritional Support in Acute Care
- Managing Obesity in Acute Care
- Overall this session aims to focus on areas that healthcare professionals are likely to encounter in practice.

NUTRITION AND CANCER PREVENTION

Francesca Ghelfi

This session will aim to cover the following:

- The latest WCRF/AICR Diet and cancer report (2018)
- Cancer prevention recommendations based on the latest scientific research
- Cancer preventability estimates for diet, nutrition, body fatness, and physical activity
- Evidence-based practical advice
- Dietary changes after cancer diagnosis: preliminary results from the Italian ECHO Survey

COURSE OUTLINES *(in order of lecture)*

NUTRITION IN AGEING INCLUDING MICRONUTRIENT DEFICIENCIES

Caryl Nowson

The aim is to have an understanding & be able to describe the influence of ageing on physiological functions related to nutrition including: common health conditions related to nutrition, body composition, sarcopenia, energy intake and expenditure alterations with ageing, impact of exercise and interaction with nutrition and desirable range of BMI for older people. Candidates should also have an understanding & be able to describe nutritional requirements for macro and micronutrients that are altered by ageing and malnutrition risk and strategies to reduce malnutrition

NUTRITION IN DISABILITY MANAGEMENT AND OCCUPATIONAL WELLBEING

Minha Rajput-Ray

This presentation will explore nutritional factors that may contribute to disease processes. Hence, impacting on morbidity, with an effect on wellbeing and performance. Since, individuals spend a fair proportion of time in the workplace setting, this presents an opportunity to enhance good nutritional practice from an occupational perspective. The content of this talk will be made as transferable as possible to a general clinical setting.

PUBLIC HEALTH AND POLICY

Day 4 or the 'Public Health and Policy' Day will also cover the Importance of the Global Nutrition Report & the UN Decade of Action on Nutrition (Sumantra Ray); Global Evidence in Nutrition (Giuseppe Grosso); Public Health Nutrition Case Studies (Shivani Bhat, James Bradfield and Harrison Carter); Nutrition, Public Engagement and Policy Formulation (Glenys Jones); the Role of Nutritional Supplements (Peter Van Dael); Precision Nutrition (Martin Kohlmeier & Harrison Carter). This series of presentations will provide insight into interlinked aspects of public health and policy as well as describing population approaches in Nutrition. It will be followed by a Blended Learning Interactive Section/Quiz.

LECTURER BIOGRAPHIES *(in alphabetical order)*

CARYL NOWSON

Caryl Nowson is a qualified dietitian, who has held the Deakin Chair of Nutrition and Ageing since 2006. She has a research program spanning more than 30 years that has focused on two major diseases of ageing: nutrition related to hypertension, and nutrition related to bone health. She has conducted many community based nutrition interventions, some combined with exercise, assessing impact on cardiovascular risk, osteoporosis risk and muscle strength. More recently she has engaged in research and relating public health strategies to achieve population salt reduction. She further extended her work into embedding nutrition into medical education both nationally and internationally and she was recently made a Fellow of the Nutrition Society of Australia. Dec 2016.

CELIA LAUR

Celia Laur is a Registered Public Health Nutritionist and a Fellow of the Higher Education Academy. She completed her BSc Honours in Health Sciences, at Carleton University in Ottawa, Canada, a Masters in Public Health Nutrition at the University of Southampton, UK, and is currently a PhD candidate at the University of Waterloo, School of Public Health and Health Systems, in Canada. For her doctoral training, Celia is working with the 'More-2-Eat' team including the Canadian Malnutrition Task Force, to pilot the implementation of the Integrated Nutrition Pathway for Acute Care (INPAC) in five hospitals across Canada. This work links well with NNEdPro aims and several NNEdPro Core Team members are co-investigators within the More-2-Eat project. Celia is funded by the Canadian Institutes of Health Research (CIHR) Doctoral Research Award. Celia is former Managing Coordinator/Analyst for the NNEdPro Group, and transitioned into her role as Global Innovation Panel Leader and International Core Team Member in 2014 when she began her doctoral studies.

DANIELA MARTINI

Daniela Martini, PhD, is Post-Doctoral Research Fellow at The Laboratory of Phytochemicals in Physiology of the University of Parma. In Parma, she worked for three years as the Developer for the project "Scientific substantiation of health claims made on food: collection, collation and critical analysis of information in relation to claimed effects, outcome variables and methods of measurement" funded by the European Food Safety Authority. She graduated in Human Nutrition and pursued a PhD in Food Science and Nutrition at the Campus Bio-Medico University of Rome, performing most of her doctoral activity at the Research Unit for Cereal Quality of the Agricultural Research Council. Her expertise includes the analysis of antioxidant compounds in foods and the evaluation of their role in the modulation of markers of oxidative stress in in vivo models.

DANIELE DEL RIO

Prof Daniele Del Rio is Associate Professor of Human Nutrition at the University of Parma, Italy, and the Scientific Director of the Need for Nutrition Education/Innovation Programme Global Centre for Nutrition & Health, in Cambridge, UK. He serves as Editor in Chief of the International Journal of Food Sciences and Nutrition. He is a proud Commendatore (Knight Commander) of the Italian Republic, title granted for scientific achievements. Dan is growing a team of young and brilliant scientists, and, within the University of Parma Microbiome Research Hub they are working on the effects of plant foods on human health, with a specific focus on the interaction of phytochemicals and the human gut microbiota as mediating steps for their beneficial actions towards human physiology. Dan is also a founding council member of the University of Parma School of Advanced Studies on Food and Nutrition, that will be formally launched in the second quarter of 2018 and will represent a state of the art research and teaching institution in the field of food science and nutrition.

LECTURER BIOGRAPHIES *(in alphabetical order)*

DORA PEREIRA

I am a Research Group Leader based at the Department of Pathology, University of Cambridge and a Principal Investigator with the MRC Unit The Gambia at LSHTM. I am a bio/chemical engineer and have a PhD in food and nutritional sciences. Prior to my PhD, I worked for 2 years as an R&D bioprocess engineer in the pharmaceutical industry. I joined the University of Cambridge in April 2016 after spending 12 years as an investigator with the MRC Human Nutrition Research Unit in Cambridge. My main research areas iron deficiency and anaemia in the context of global health. I conduct pre-clinical and clinical studies focusing on: (1) the risk-benefit balance of iron supplementation and iron deficiency and (2) the interaction between iron nutrition, the gut microbiome and enteric pathogens. In 2014, I was awarded the first prize at the RSC Emerging Technologies Competition for the development of a novel iron supplement with potential for global benefit. I am currently leading a large field clinical trial (called IHAT-GUT) in rural Gambia where we are investigating the safety and efficacy of oral iron supplements in young children.

EDEN BARRETT

Eden Barrett is a dietitian and PhD student at the University of Wollongong, Australia. She is currently a member of the Global Innovation Panel, with key roles in the organisation and facilitation of the 2018 Summer School and Summit. Eden is based in Cambridge, UK for 2018 as a visiting student at Wolfson College, University of Cambridge. She was awarded an Australian Awards Endeavour Postgraduate scholarship for the duration of her visiting studentship in Cambridge. Eden's main research interests are in public health nutrition and nutritional epidemiology. Her PhD project is exploring the role of dietary fibre in the cardio-metabolic health effects of whole grain foods.

ELEANOR BECK

Associate Professor Eleanor Beck is Discipline Leader in Nutrition and Dietetics at the University of Wollongong, in New South Wales, Australia. Eleanor has more than 25 years' experience in clinical practice and dietetics education. Eleanor was part of the expert working group for review of the National Competency Standards for Dietitians and both the Advanced Accrediting Practising Dietitian and Fellow competency standards for the Dietitians Association of Australia. Eleanor teaches clinical dietetics and coordinates both the undergraduate and postgraduate dietetic education programs at the University of Wollongong. Her clinical research includes close links with dietetics service delivery in hospitals, while working with industry partners and international collaborators in grains research. Current projects include work on systematic reviews of both individual grains and fibres, and how these are promoted in the diet, as well as clinical trial work with cereal fibre and whole grains and their effects on metabolic health. Eleanor is also Deputy Chair of the Council of Deans of Nutrition and Dietetics (ANZ) and the Chair of the ANZ NNEdPro group, which is part of a global network to promote nutrition education and research in health professions, especially medicine.

FRANCESCA GHELFI

Francesca Ghelfi is a PhD Student at the University of Parma, focused on nutrition science education and communication in two different settings: catering schools and oncology centres. She has a Bachelor Degree in Gastronomic Science (University of Parma) and a Master Degree in Food and Human Nutrition (University of Milan). Francesca is also a nutritionist with professional licence at the European Institute of Oncology of Milan, as coordinator of the "SmartFood social network" and "SmartFood: science and nutrition for the future cooks" projects. The primary aim of these projects is to fill the existing knowledge gap between health institutions and general public (in particular students and patients) about health and nutrition, through scientific dissemination.

LECTURER BIOGRAPHIES *(in alphabetical order)*

FRANCESCA SCAZZINA

Francesca Scazzina is an Assistant Professor at the Department of Food and Drug, University of Parma. Her research work starts in 2005 with a main focus on complex carbohydrate, dietary fibre, prebiotics and antioxidants in foods, and their effects on metabolism and intestinal functions. During her Ph.D. studies, she was a visiting scientist at the School of Food Biosciences, Food Microbial Sciences Unit, University of Reading (UK). She also was involved in population surveys in the Italian section of the European Prospective Investigation into Cancer and Nutrition (EPIC). In these research fields, she is co-author of several publications on international peer reviewed Journals. Since 2009, being involved in food educational projects implemented in primary schools of the Parma area, Francesca acquired a deep experience in educational health learning programs and children population surveys.

FUMIAKI IMAMURA

Fumiaki Imamura is a nutritional epidemiologist at Medical Research Council Epidemiology Unit, University of Cambridge. He received a BS in chemistry at Sophia University, Tokyo, Japan, in 2002. In the United States, he received an MS in nutrition in Columbia University, New York, in 2003; a PhD in nutritional epidemiology in Tufts University, Massachusetts, in 2009; and post-doctoral training in Department of Epidemiology in Harvard School of Public Health, Massachusetts, in 2009-2013. He has received a number of awards including Scott Grundy Fellowship Award for Excellence in Metabolism Research, American Heart Association, in 2012, been one of editorial board members of J Academy of Nutrition and Dietetics and of J Nutrition and, been selected as one of the best peer-reviewers for the BMJ in 2015 and for the Annals of Internal Medicine in 2011-2015. His research interest includes epidemiology of cardiometabolic risk, risk factors and methodology of characterising dietary habits for the primary prevention of non-communicable diseases.

GABRIELE MOCCIARO

Gabriele Mocciaro's main research interest lies in the field of nutrition and metabolism. Specifically, he plans to investigate the role of diet and nutrients on the prevention and treatment of metabolic disease and its complications (coronary heart disease, type 2 diabetes, fatty liver, Alzheimer's disease, and cancer). During his MSc internship, he worked within two trials aiming to unravel the role of the Mediterranean diet in reversing the features of Metabolic Syndrome in subjects with Mild Cognitive Impairment, and in investigating the impact of this dietary pattern in the risk of relapse of breast cancer. He then moved to the University of Newcastle as a visiting student where, under the supervision of Dr Mario Siervo, he supported interventional trials, learned basics of biomedical statistics (SPSS) that he applied to retrospective analyses (the results will be submitted soon). Following this experience, he moved to the MRC Elsie Widdowson Laboratory in Cambridge, where he was involved in nutritional research projects and education. Finally, he has recently joined the Department of Biochemistry at the University of Cambridge as a Research Assistant.

GIUSEPPE GROSSO

Giuseppe Grosso's research focuses on impact of dietary and lifestyle habits on common non-communicable diseases. In particular, he produced over 80 papers on the effects of dietary patterns (i.e., Mediterranean diet) and specific antioxidant-rich foods (i.e., coffee, tea), as well as individual antioxidants (polyphenols, n-3 PUFA) on cardiovascular and metabolic diseases, cancer, and depression. Dr. Grosso conducted his research on cohorts of individuals in both Mediterranean and non-Mediterranean countries collaborating with several research centers in Europe and US. He is interested in evidence synthesis to generate policy-oriented research in the area of public health nutrition. He is a cum-laude graduated medical doctor and PhD.

LECTURER BIOGRAPHIES *(in alphabetical order)*

GLENYS JONES

Glenys Jones is a Registered Nutritionist who started her career at the University of Surrey, where she studied for her BSc (Hons) in Nutrition and undertook a placement in an NHS Nutrition & Dietetics Department where she gained a distinction. Glenys went on to complete a Masters in Sports Physiology before combining her work in these subjects to graduate with a PhD in nutrition, health and performance. Glenys went on to work as a nutritionist specialising in communications at the Medical Research Council's Human Nutrition Research unit in Cambridge and also won a place on the European Nutrition Leaders Platform. At the MRC Glenys was responsible for a wide range of public engagement and knowledge transfer activities, including work with the media, industry, policymakers and healthcare professionals. This cemented a passion for nutrition communications and education, and marked the start of Glenys' work with NNEdPro, the promotion of nutrition education for all healthcare professionals and the responsible reporting of science in the media. Glenys currently works at the Association for Nutrition as their Communications Manager and was Research Lead on a recent PHE project to develop nutrition competency frameworks for those working in fitness, leisure and catering.

HARRISON CARTER

Harrison Carter is a member of the global innovation panel on the NNEdPro Core Team and Chairman of the British Medical Association's (BMA) UK Medical Student Committee being the longest serving chair of this committee in the history of the BMA. As chair of this committee he is the lead negotiator with UK Government on policy pertaining to medical students. As well as this he is a member of BMA Council and a Key Spokesperson for the BMA. Harrison has a strong interest in clinical and public health nutrition and was co-lead applicant for the Nutrition Education Policy in Healthcare Practice initiative which was awarded the International MNI Award at the European Society of Parenteral and Enteral Nutrition Congress at The Hague. Harrison was previously a Newton College Masters Student at Downing College, Cambridge where he studied an MPhil in Public Health. With an interest in laboratory research Harrison was also a Lister Fellow Student at Oxford University and has a Bachelor's degree in Cancer Biology and Immunology which was awarded Kidney Research UK's, UK intercalated degree award. His work, during this degree, observing glomerular blood vessel changes in specimens with diabetic nephropathy was also awarded national Wellcome Trust and Academy of Medical Sciences prizes.

JAMES BRADFIELD

James has recently completed his BSc in Nutritional Sciences at University College Cork and will begin a masters degree in Human Nutrition and Dietetics at the University of Chester next September. He is a member of the NNEdPro Core Team having initially joined as an intern in 2017 before later joining the Global Innovation Panel. He currently coordinates the group's e-Learning projects and the monthly article in Complete Nutrition. James has a keen interest in clinical nutrition and epidemiology which led to him undertaking a final year research project investigating the role of visceral adiposity on gastrointestinal cancer survival rates.

LISA SHARKEY

Dr Lisa Sharkey qualified from the University of Cambridge and completed her Gastroenterology training within the East of England rotation. She has specialist interests in clinical nutrition, intestinal failure and intestinal transplant. Lisa is involved in undergraduate and postgraduate education in nutrition and is the nutrition representative for the national Gastroenterology Training Committee. Her research interests include Intestinal Failure Associated Liver Disease, nutritional outcomes after intestinal transplant and biomarkers of graft rejection.

LECTURER BIOGRAPHIES *(in alphabetical order)*

MARTIN KOHLMEIER

Martin Kohlmeier, MD, PhD Completed graduate studies in bioinformatics, clinical chemistry and laboratory medicine at Heidelberg University, at the Max-Planck-Institute for Nutrition Research in Dortmund, and later at the Free University in Berlin. He is professor of nutrition at the University of North Carolina at Chapel Hill, director of the Human Research Core and the nutrigenetics laboratory at the UNC Nutrition Research Institute in Kannapolis, visiting fellow of Wolfson College at Cambridge University, UK, president of the International Society of Nutrigenetics/Nutrigenomics (ISNN), and founding editor of BMJ Nutrition, Prevention and Health. He has initiated the Train Nutrition Trainers (TNT) network of medical nutrition educators at the American Society for Nutrition and has contributed to the development, implementation and evaluation of nutrition education materials that are used at most US medical schools and in more than twenty other countries. He investigates what individual differences mean for nutrient metabolism and how innovative technologies can support better nutrition decisions in practice..

MEI YEN CHAN

Mei-Yen Chan was trained as a clinical dietitian and she has a strong background in food and nutrition education and research, with expertise including, chronic diseases treatment and management, specifically cardiovascular disease and obesity. As a course leader, she led the design of a postgraduate public health nutrition programme in UK. Her teaching philosophy is to enhance nutrition capacity and to develop critical food and nutrition researchers to meet today's global challenges in food security. She has a broad body of experience in the co-ordination and administration of academic duties as well as management of research projects as the lead PI. Her research interests lie in non-communicable diseases prevention and management, diets of young children and adolescents, cognitive dissonance, food-related attitudes and behaviours, personalized nutrition interventions, and role of dietary intake & health status of South East Asians.

MICHELE VACCA

Michele Vacca is a Clinician Scientist at the Department of Biochemistry and at the Institute of Metabolic Science at the University of Cambridge. After his medical studies at the University of Bari (Italy, 2004), Michele specialised in Internal Medicine (2008) and completed his PhD in Oncology and Molecular and Clinical Pathology at the University of Chieti-Pescara (Italy) in 2012. From 2008 to 2014 Michele was also research fellow of the Consorzio Mario Negri Sud (Italy), and visiting clinician at the Ambulatory of Clinical Nutrition, Clinica Medica Murri, University of Bari. Michele's main clinical interest lies in the area of mixed dyslipidaemia and non-alcoholic steatohepatitis, particularly the interaction between nutrition, obesity and the progression of liver and cardio-metabolic disease. His main scientific interest is understanding the molecular (e.g. Nuclear Receptors, miRNAs, signalling, hepatocyte regeneration) and lipid (e.g. products of the de novo lipogenesis) pathways underlying the progression and metabolic and liver diseases toward cardiovascular disease, cirrhosis and cancer (HCC).

MICHELLE VENABLES

Michelle Venables is an Investigator Scientist and team lead for the stable isotope division within the Nutrition, Surveys and Studies Department at the MRC Human Nutrition Research Unit. She also acts as a scientific mentor for the NIHR/Wellcome Trust Clinical Research Facility, Cambridge. She has a strong background in physiology and exercise metabolism, obtaining her PhD from the School of Sport and Exercise Sciences, University of Birmingham. More recently she has been investigating the role of high fat overfeeding and gastric emptying on substrate utilization in healthy and clinical populations. Alongside this work her team utilize doubly labelled water in estimations of total energy expenditure for a variety of projects with national and international collaborators.

LECTURER BIOGRAPHIES *(in alphabetical order)*

MINHA RAJPUT-RAY

Minha Rajput-Ray is a Licensed Medical Doctor, as well as a Registered Osteopath. After gaining a First Class Honours degree, Minha carried on to read Medicine at the University of Dundee. After her basic medical training in Dundee, Minha held an NIHR Academic Clinical Fellowship in Rheumatology and General Medicine at the University of Cambridge. She subsequently developed a career in Disability and Occupational Medicine, having been awarded the Mobbs Corporate Fellowship of the Royal College of Physicians Faculty of Occupational Medicine as well as the Golden Jubilee Travelling Fellowship of the Society for Occupational Medicine. Minha is Chair of the International Commission on Occupational Health (ICOH) Scientific Committee on Unemployment, Job Insecurity and Health as well as Member of the ICOH Scientific Committee on Cardiology and Occupational Health. She has continued to maintain a special interest in Nutrition and teaches aspects of Clinical Nutrition to Cambridge medical students and more widely. As NNEdPro Medical Director, Minha leads on all aspects of the programme that require medical advisory input as well as developing a strand of work at the interface between Nutrition/Hydration and Disability/Occupational Medicine.

NIDA ZIAUDEEN

Nida Ziauddeen graduated with a BSc degree in Clinical Nutrition and Dietetics, Chemistry and Zoology from Bangalore University in 2007 followed by a MSc degree in Clinical Nutrition from Roehampton University in 2008. Nida has worked at the Medical Research Council Human Nutrition Research Unit in Cambridge since completing her MSc in several different roles in the dietary assessment and data operations team. During this time Nida has worked on several large surveys and studies. Most recently in her role as Data Analyst Scientist, Nida has primarily worked on the National Diet and Nutrition Survey data to prepare reports, carry out secondary analysis and writing reports and papers. In September 2016 Nida started a PhD position investigating maternal and early risk factors of overweight and obesity at the University of Southampton.

PAULINE DOUGLAS

Pauline Douglas has over 25 years of Clinical and academic experience in dietetics. As a clinical dietitian she worked in the area of nutritional support for surgical and oncology patients in a large teaching hospital. Her main teaching disciplines in the University of Ulster are in Professional Practice for dietetic students and dietetic practice educators. She is also involved in a number of interprofessional learning pilots in both academic and practice settings. Pauline is her Professional Body's European and alternate International representative. She is a member of the Professional Practice Committee of European Federation of the Associations of Dietitians. This is currently working on dietetic Registration and Regulatory practice throughout Europe. She also is Key Contact for University of Ulster in "Dietitians Improving the Education and Training Standards (DIETS) project" and is a member of Work package 8 – Exploitation. Pauline is the current Chair and co-founder of the Commonwealth Dietitians and Nutritionists Association. Pauline is a partner with the Health and Care Professions Council, the statutory regulator for Allied Health Professions in the UK, and was a previous Honorary Chairman of the British Dietetic Association (BDA). She was elected to Fellowship of the BDA for her professional achievements in 2010.

LECTURER BIOGRAPHIES *(in alphabetical order)*

PETER VAN DAEL

Peter Van Dael obtained his PhD in food chemistry from the University of Antwerp, Belgium for his research on the selenium distribution in human and cow milk. Peter's professional focus has been mainly in the field of infant nutrition from research, project management to regulatory and nutrition science. Prior to joining DSM in August 2017, Peter worked for Nestlé, Royal Numico and most recently for Mead Johnson Nutrition. He also holds a M.S. in Human Nutrition from the University of Lausanne, Switzerland and a MBA from Economical High School Antwerp, Belgium. Over the past 15 years Peter has been engaged in international nutrition and regulatory activities related to early life nutrition. He is a member of European Society for Pediatric Gastroenterology, Hepatology and Nutrition and board member of the International Special Dietary Food Industries. Peter strongly believes in public private partnerships to ensure meaningful nutritional solutions and appropriate food regulations ensure the growing world population has access to safe and nutritious foods and food ingredients. At DSM Peter has the challenging and rewarding task to succeed Manfred Eggersdorfer and maintain the spirited engagement of Nutrition Science & Advocacy inside and outside of DSM.

PEDRO MENA

Dr Pedro Mena is presently working as Senior Research Fellow in the Human Nutrition Unit, Dept. of Food & Drugs, University of Parma, in Italy. His line of research is related to the bioavailability and biological activity of plant bioactives in human, animal, and cell models, with a particular focus on (poly) phenolic compounds and caffeine. He carried out his pre-doctoral work in the Group of Quality, Safety and Bioactivity of Plant Foods (Dept. of Food Science) with Prof Cristina García-Viguera, the development of pomegranate-derived food products rich in bioactive phytochemicals being the topic of his Doctoral Thesis. In Parma, Pedro gained further knowledge in the colonic/phase II metabolism of plant bioactives, worked actively with mass spectrometric techniques, and was involved in various projects linked to the bioactivity of phenolic metabolites. He started his postdoctoral fellowship with Prof. Del Rio, and, since October 2013, he has been working actively on dozens of (inter)national industry/academia projects targeting the bioavailability and bioactivity of plant bioactives. He has published several works on targeted metabolomics applied to phytochemicals and he is currently involved in metabolomics and lipidomics analyses in urine and plasma of healthy volunteers consuming coffee and cocoa.

RACHEL KEANE

Rachel currently a member of the NNEdPro Key Resources Panel with the role of NNEdPro Intern and Directors' Assistant. She is also heavily involved in the planning of our annual Summer School and Summit, acting as Summer School Joint Organising Coordinator. Outside of NNEdPro, Rachel is currently studying BSc Nutritional Sciences at University College Cork.

RAJNA GOLUBIC

Rajna Golubic is a deputy co-lead of the NNEdPro Global Innovation Panel. She qualified as an MD at the Zagreb University School of Medicine in Croatia. She obtained a doctorate (DSc) in occupational and sports medicine at the same university and undertook advanced training in clinical research methods at the Erasmus Medical Centre, Rotterdam, the Netherlands (as a Netherlands Institute for Health Sciences Fellow). Rajna completed an MPhil in Public Health at Cambridge and a PhD in Epidemiology at the MRC Epidemiology Unit, both as a Gates Scholar. Her PhD research focused on the descriptive epidemiology and measurement aspects of physical activity as well as its associations with cardio-metabolic diseases. She is associate editor of the Oxford Handbook of Clinical and Healthcare Research. In 2018, Rajna has been awarded a National Institute for Health Research Academic Clinical Fellowship which allows her to pursue a higher specialist training in diabetes and endocrinology while conducting related clinical research at Cambridge.

LECTURER BIOGRAPHIES *(in alphabetical order)*

SHIVANI BHAT

Shivani is currently a medical student at the University of Limerick, Graduate Entry Medical School and Local Medical Education Officer with the Association of Medical Students Ireland (AMSI). She earned her Masters in Public Health from King's College London and has a Bachelors of Science in Physiology from McGill University, Canada. She conducted her thesis project with the Medical Research Council, Human Nutrition Research on the Association of Dietary Patterns and Carotid Intima Media Thickness which qualified as a finalist among thousands of candidates for the Emerging Young Leaders in Nutrition Science Competition at Experimental Biology Conference 2016 in San Diego, USA. She is currently a research assistant at the Primary Care Research Unit at Sunnybrook Hospital, University of Toronto and with the University Health Network. Her research interest lies in translation science, primarily in the prevention and management of cardiovascular diseases through lifestyle modification and is currently working towards a career in clinical and translation research. Shivani has been part of the NNEdPro Core Team since August 2015 playing a pivotal role in Public Relations and former Editor of NNEdPro's Complete Nutrition Column.

SIMON POOLE

Simon Poole MBBS DRCOG is a Cambridge based medical doctor, author, broadcaster and commentator. He is an internationally renowned authority on nutrition and the science and application of the Mediterranean Diet and lifestyle, explaining and celebrating the combination of wonderful ingredients in this beautiful cuisine which can add years to life. He is an expert scientific consultant on extra virgin olive oil. Simon is a partner at a family medical practice in Cambridge since 1992 and works with the Clinical Governance and Commissioning as well as participates in National Health Service public health projects to include the National Cardiovascular Strategy. Simon has regularly published on the subject of nutrition and lifestyle and public health in scientific journals including Nutrition and Food Science and the International Journal of Clinical Practice. In addition he has written articles for The Guardian and magazines such as Cook Vegetarian and Body Language, as well as contributing to international, radio and television appearances. His new book The Olive Oil Diet takes a fresh and exciting look at diet, foods, cooking and health, on a gastronomic journey. The book tells the story of ingredients from around the Mediterranean – from different olive oils, mountain herbs and near eastern spices to regional vegetables and fruits, cheeses and wine, unlocking the secrets of this most healthy of diets. The book has recently been awarded the accolade of National 2017 winner in the international Gourmand Prize for food and cookery writing - which is described as the food writing equivalent of the "Oscars".

SUMANTRA RAY

Sumantra 'Shumone' Ray is a Medical Doctor and Registered Nutritionist, with interests in Nutrition, Cardiovascular Disease and Medical Education. Since 2008 Shumone has been Founding Chair and Executive Director of the NNEdPro Global Centre for Nutrition and Health, which holds its annual international summer school and summit at Wolfson College Cambridge since 2015 when he was elected as a governing body Fellow of Wolfson College and a Senior Clinical Tutor at the University of Cambridge. He also works for the Medical Research Council as a Senior Clinician Scientist in Nutrition and Vascular Studies as well as the UK National Diet and Nutrition Survey Lead Clinician (Public Health England). Also in 2015, NNEdPro won the Complete Nutrition Outstanding Achievement Award and Shumone was appointed as Adjunct Professor at University of Waterloo in Canada as well as receiving a Griffith University Visiting Fellowship from Australia. In 2016, Shumone was appointed as Visiting Professor at Imperial College London as well as Ulster University in Northern Ireland and NNEdPro was a finalist and runner-up in the 2016 BMJ Awards. Also in 2016, Shumone published the Oxford Handbook of Clinical and Healthcare Research aimed at strengthening basic research skills across the global health-related workforce and became Programme Director for the Cambridge Summer School in Applied Human Nutrition.

In 2017 Shumone was elected to an Honorary Professorial Fellowship at the University of Wollongong Australia whilst NNEdPro won the Medical Nutrition Industry International Award in conjunction with the European Society for Parenteral and Enteral Nutrition. Also in 2017 he was a successful co-applicant to a Global Challenges Research Fund (GCRF) grant >£7M awarded to the University of Cambridge and is Co-Lead of a GCRF Flagship Project in India on education, empowerment and entrepreneurship leading to improved human nutrition, health and wellbeing. In 2018 he became the Founding Co-Chair, along with the British Medical Journal (BMJ) Group, of BMJ Nutrition, Prevention and Health. Most recently Shumone has been appointed as Course Director in Nutrition Science at the University of Cambridge Institute of Continuing Education.

COURSEWORK

1. Essay: 'Strategies to develop international knowledge application networks in nutrition.'
2. Practical Workshop: Anthropometry and Bioimpedence Methods (Saturday July 14th)
3. Dietary Assessment Workshop (Saturday July 14th)
4. Critical Appraisal Workshop (Sunday July 15th)
5. Blended Learning Quiz (based on NIM videos sent prior to Summer School commencing) (Tuesday July 17th)
6. Final Assessment (MCQ) (Wednesday July 18th)

READING LIST

GENERAL NUTRITION

Oxford Handbook of Nutrition and Dietetics
Edited by Joan Webster-Gandy
Second Edition

Introduction to Human Nutrition
The Nutrition Society Textbook Series
Second Edition

NUTRITION AND METABOLISM

Nutrition and Metabolism
The Nutrition Society Textbook Series
Second Edition

Public Health Nutrition
The Nutrition Society Textbook Series

NUTRITION EPIDEMIOLOGY

Nutritional Epidemiology
Walter Willett
Third Edition

KEY SOCIETIES

Nutrition Society
www.nutritionandsociety.org

British Dietetic Association
www.bda.uk.com

Association for Nutrition
www.associationfornutrition.org

SCIENTIFIC REPORTS

Science Advisory Committee on Nutrition (SACN)
www.sacn.gov.uk

Reports and Position Papers: www.sacn.gov.uk/reports_position_statements/index.html

WHO Nutrition
www.who.int/nutrition/en/

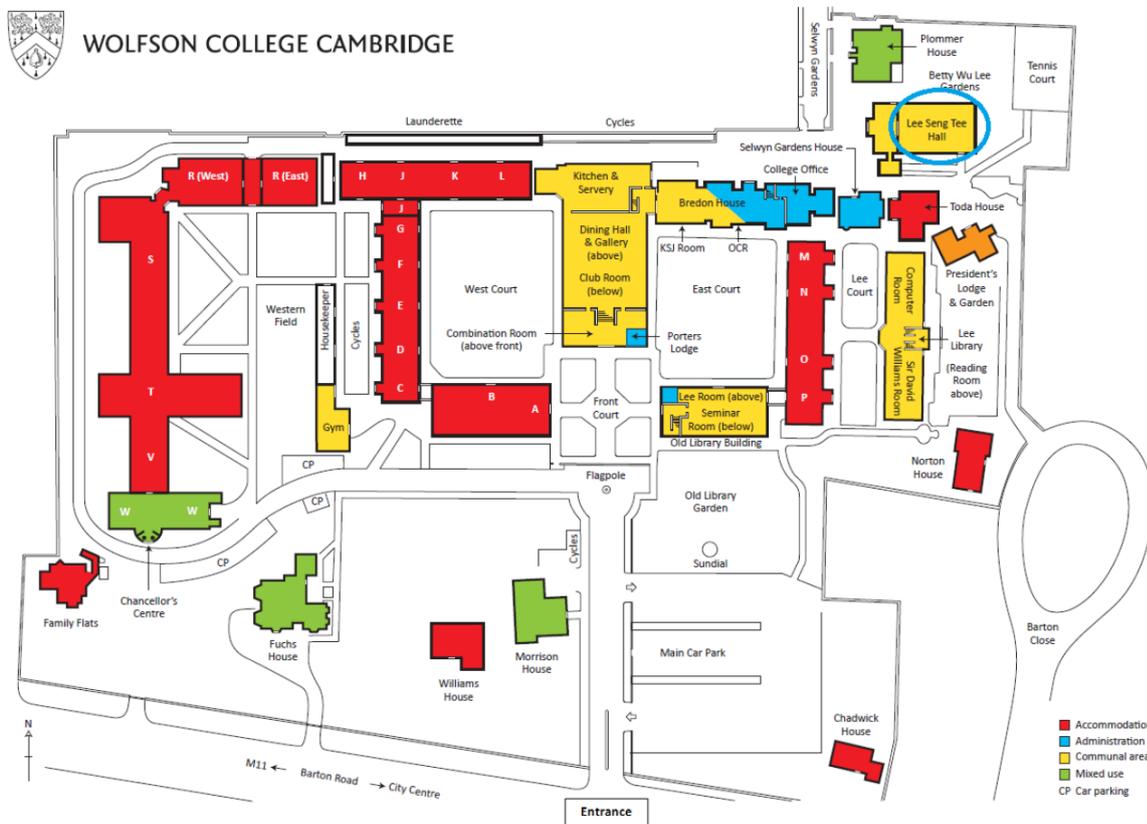
Food and Agriculture Organisation of the United Nations
www.fao.org/home/en/

LOCATION

You will find a map of Wolfson College below where all five days of Summer School will take place.

The address for Wolfson College is
Wolfson College
Barton Road
Cambridge CB3 9BB

For those candidates staying at Murray Edwards College the address is:
Murray Edwards College
Huntingdon Rd
Cambridge CB3 0DF



CONTACT US

As always we can be contacted at info@nnedpro.org.uk or our candidate relations lead **Shivani Bhat** at s.bhat@nnedpro.org.uk

Should you need immediate help during the Summer School please call our dedicated NNEdPro mobile on +44 7759 594753 or our Director Prof Shumone Ray on +44 7743 988276.

With kind support from:



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Specialist Partners:



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