

## Welcome to the latest edition of HNRC News

### News

#### Remission of Type 2 diabetes after dietary intervention

These findings come from the DiRECT Study - a project funded by Diabetes UK and led by Professor Roy Taylor (Newcastle University) and Professor Mike Lean (Glasgow University).



Professor John Mathers, Professor Ashley Adamson and Alison Barnes are members of the DiRECT Study team. Working with diabetic patients in primary care, the DiRECT study showed that 86% of participants who lost at least 15kg body weight achieved remission to a non-diabetic state. The results from this study have been published in The Lancet and full details can be found [here](#).

#### Development of the MapMe intervention body image scales of known weight status for 4-5 and 10-11 year old children.

Members of the public health nutrition team have recently had their work on the development of body image scales of known weight status for 4-5 and 10-11 year old children published in the Journal of Public Health <https://academic.oup.com/jpubhealth/advance-article/doi/10.1093/pubmed/fox129/4668752> .

The scales have recently been tested in a large trial, as part of an intervention to investigate ways of helping parents make better judgements of their child's weight status and to prompt action at an early stage. Research shows that many parents with an overweight child do not identify when their child has an unhealthy weight, and so may not make appropriate changes to their child's lifestyle or seek support. Nearly 3000 families with 4-5 and 10-11 year old children joined the study, from 15 regions across England. The trial collected data on parental ability to correctly categorise their child's weight status. Height and weight information was collected from over 2300 children 12 months post -intervention to examine the efficacy of the

intervention on longer term child weight outcomes. More detailed results will be the topic of a feature in a future newsletter, so watch this space!!!

## Overseas Collaborations

### Visit from Dr Geeta Appannah, Universiti Putra Malaysia

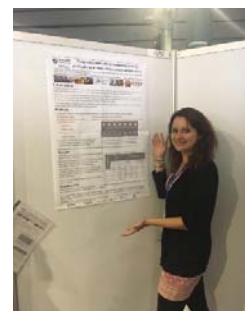
Dr Geeta Appannah visited colleagues in the HNRC in late November. Geeta works at the Department of Nutrition and Dietetics, Faculty of Medicine and Health Sciences, UPM. She is an Early Career Researcher who was funded to complete a short attachment in the UK to explore on-going UK-based weight loss strategies in children and pregnant women.

## HNRC Successes

Dr Sorena (Sonny) Afshar won an academic surgical prize at the first scientific meeting of the Academic Surgical Unit at North Cumbria University Hospitals NHS Trust on Friday 27<sup>th</sup> October 2017. Sonny's PhD thesis is entitled "**Obesity, weight loss surgery and biomarkers of colorectal cancer risk**". He was awarded his PhD at *the Special Honorary Degree Ceremony* on 13<sup>th</sup> November 2017 when the University commemorated the 50<sup>th</sup> anniversary of Dr Martin Luther King Jr receiving an honorary degree from Newcastle University.



Laura Cutler won a Poster Prize at the 24th European Congress on Obesity in Porto, Portugal. The poster, "**Comparing methods of assessing parental perceptions of their obese child's weight status**" was chosen by the Scientific Committee of the International Conference on Childhood Obesity (CIOI) 2017 as the best poster in the childhood obesity track and the prize was free registration to attend CIOI 2017 in Lisbon in July with the opportunity to present the poster.





Dr Suzanne Spence, NIHR Academic Clinical Lecturer, received an Academy of Medical Sciences Springboard – Health of the Public 2040 award.

<https://internal.ncl.ac.uk/medical/about/news/item/suzanne-spence>

Congratulations to Duaa Altuwarki (supervised by Prof Chris Seal & Dr Anthony Watson) who won second place for her oral presentation at this year's North East Postgraduate Conference 2017. Duaa discussed dates and brain function.



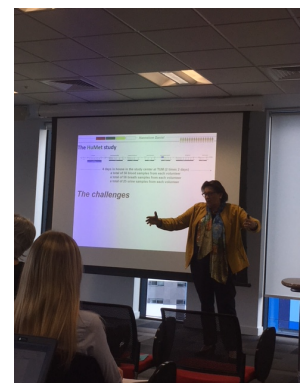
## Prizes galore at HNRC Research Day

This year's HNRC Research Day, attended by Professor Chris Day (Vice-Chancellor and President), was held in the Partner's Room in the Business School on Wednesday 11 October. The nearly 100 registrants for the Research Day enjoyed a wide range of presentations from PhD students and Early Career Researchers. As usual there was stiff competition among the PhD students for the Best Poster prizes and this year's winners were:

- 1st Laura Cutler
- 2nd Nik Zakaria
- 3rd Natassia Robinson

In addition, in the Open Poster competition, prizes were awarded to: Wendy Wrieden, Emma Simpson and Wasim Iqbal.

The climax of the day was the HNRC Annual Lecture given by Professor Hannelore Daniel from the Technical University Munich on the topic **"We are all individuals"**. This tour de force lecture showed elegantly the power of deep phenotyping in revealing how each of us responds differently to nutritional and other challenges, the mechanisms responsible for this individuality and the potential consequences for long-term health.



# Upcoming Events

## NuGOweek 2018 “Mitochondria, Nutrition & Health”



**Date:** Monday 3<sup>rd</sup> – Thursday 6<sup>th</sup> September 2018

**Venue:** Centre for Life, Newcastle upon Tyne

**Key Note Speaker:** Prof Sir Douglass Turnbull will give a scene-setting lecture on “Mitochondria in health and disease”

**Confirmed Speakers are:**

Dr Baruch Barzel – Bar-Ilan University, Israel  
Prof Carsten Carlberg – University of Eastern Finland, Finland  
Prof John Chambers – Lee Kong Chian School of Medicine, Singapore  
Prof Chris Evelo – Maastricht University, The Netherlands  
Prof Edith Feskens – Wageningen University & Research, The Netherlands  
Prof Karsten Hiller – Technical University Braunschweig, Germany  
Prof Marjo-Riitta Jarvelin – Imperial College London, UK  
Dr Anthony Mathelier – University of Oslo, Norway  
Dr Sara Pauwels – Catholic University Leuven, Belgium  
Prof Ram Reifen, The Hebrew University of Jerusalem, Israel  
Prof Lothar Rink – RWTH Aachen University, Germany  
Prof Luca Scorrano – University of Padua, Italy  
Prof Patrick Schrauwen – Maastricht University, The Netherlands  
Dr Gaofeng Wang – University of Miami, USA

For more information visit the conference website: [NuGOweek 2018](#).

## HNRC Research Day and Annual Lecture 2018

**Date:** Wednesday 17<sup>th</sup> October 2018, 10am-5pm

**Venue:** Partners Room, Newcastle Business School, Barrack Road

**Speakers:** HNRC Staff & Students will showcase their current research

**Annual Lecture:** Professor Susan Jebb, Professor of Diet and Population Health, University of Oxford

Further details and how to register for the event will soon be available at the [HNRC Website](#) .

## Eurocaroten Training School: Bioavailability of Carotenoids

**Date:** Monday 19<sup>th</sup> – Friday 23<sup>rd</sup> March 2018

**Venue:** School of Medicine, University of Newcastle

**Organisers:** Dr Georg Lietz & Dr. Antonio J. Meléndez-Martínez (Universidad de Sevilla, Spain)

Eurocaroten together with the HNRC have put together a training school with focus on carotenoid bioavailability and related measurement of potential contributing factors to high inter-individual variations.

### **Confirmed Speakers Include:**

Dr Torsten Bohn - Luxembourg Institute of Health, Luxembourg  
Dr Emmanuelle Reboul - Centre CardioVasculaire et Nutrition, France  
Dr Warwick Dunn - University of Birmingham  
Dr Rachel Kopec - The Ohio State University, USA  
Dr Achim Treumann – Newcastle University  
Dr Charles Desmarchelier - Université d'Aix-Marseille, France  
Dr Gordon Strathdee – Newcastle University  
Prof John Mathers - Newcastle University  
Dr Anthony Oxley - Newcastle University  
Mr Adam Clark - Newcastle University  
Prof Mike Green – PennState University, USA  
Ms Jennifer Ford - PennState University, USA

## 5<sup>th</sup> UK Congress on Obesity - Preconception to Pension: Obesity through the Life Course

**Date:** Thursday 6<sup>th</sup> & Friday 7<sup>th</sup> September 2018

**Venue:** Armstrong Building, Newcastle University

### **Confirmed Speakers Include:**

Dr João Breda - WHO Europe  
Prof Ashley Adamson - Newcastle University  
Prof John Mathers - Newcastle University  
Prof Rachel Batterham - University College London  
Prof Henning Bliddal - Copenhagen University, Denmark  
Prof Roland Devlieger - KU Leuven, Belgium  
Prof John Chambers - Imperial College London  
Prof Annie Anderson - Dundee University  
Prof Roy Taylor - Newcastle University  
Dr Emma Boyland - University of Liverpool

For more information visit the conference website: <https://www.aso.org.uk/events/ukco/> .

# Invited lectures at Events/Conferences

**ISENC Conference – 19-21 December 2017** - Newcastle University hosted the very successful International Sport and Exercise Nutrition Conference. The conference attracted more than 300 delegates from over 20 countries. Delegates heard from nutrition experts on a range of topic areas including periodised nutrition for athletes, gut health, liver glycogen metabolism, the health benefits of beetroot juice and the impact of nutrition and exercise on ageing and cell signalling. Three HNRC members, Professor Emma Stevenson, Professor John Mathers and Dr Emma Foster presented in symposium sessions at the conference.



The highlight of the conference was a Q&A session with Sir Chris Hoy on his career and the role of sport and exercise science and nutrition in his successes to date. We hope that all delegates and speakers enjoyed their time at Newcastle University.

Prof Emma Stevenson was also invited to speak at:

- Food Matters Live November 2017 – presentation title ‘protein for life: towards a focussed dietary framework for healthy ageing’.
- British Association of Sport and Exercise Science November 2017 – presentation title ‘Nutrition, exercise and appetite: hungry for more’.

Prof John Mathers was invited as a Plenary Speaker at the Korean Nutrition Society’s 50<sup>th</sup> Annual Meeting in November 2017, in Seoul. His presentation was entitled: ‘Obesity and bowel cancer: from molecular mechanisms to interventions’.

Dr Daniel West was invited to speak at the International Whey Conference, Chicago, in September 2017. His presentation title was ‘Dairy protein and type 2 diabetes: what do we know?’

Tom Hill was invited as a co-editor to the Nutrition Society textbook 'Introduction to Human Nutrition' which is the best performing textbook in the Society’s Textbook Series with over 17,500 sales to date across the first and second edition. The textbook is guided by Editor-in-Chief, Professor Susan Lanham-New, and has been widely adopted by nutrition courses throughout the world with translations into Spanish, Portuguese, French and Indonesian.

## PhD Successes

Rebecca Brown who was funded through the MRC / Arthritis Research UK Centre for Integrated Research on Musculoskeletal Ageing (CIMA) undertook research on **“The effect of vitamin D and physical activity on knee osteoarthritis symptoms in older obese adults: a mixed methods study”** supervised by Prof John Mathers, Dr Nicola O'Brien, Dr Leah Avery and Dr Daniel Cuthbertson of Liverpool University. Becky has defended her PhD thesis successfully and is now working on evidence synthesis and horizon scanning within the NIHR Innovation Observatory.

Nieka Wahono (supervised by Dr Ruth Valentine) successfully defended her PhD in **‘Deciduous teeth as a tool to record early life exposure of zinc nutrition’**. She returned to Indonesia in January, but we hope to continue to work together.

Azizah Mat Hussin (supervised by Dr Mario Siervo, Dr Tom Hill and Prof John Mathers) defended her PhD thesis successfully in late October, and has returned to her university post in Malaysia.

Nuno Mendonca (supervised by Dr Tom Hill, Prof Chris Seal and Prof Carol Jagger) successfully defended his PhD thesis titled **'Micronutrients and health in the very old: Analysis of the Newcastle 85+ Study'** in early October. Nuno has published 5 peer reviewed papers as part of his PhD and was nominated for a Faculty Doctoral Thesis prize by his external examiners. He was also selected to participate in the upcoming ENLP programme in Luxembourg in April. Nuno is now working as a Research Assistant in the Institute of Health & Society.

Dr Susanna Mills passed her viva in early November 2017. The graduation ceremony was held on Thursday 7 December. Dr Mills was also successful in being appointed to an NIHR Clinical Lectureship a few days before.

## Welcome and Goodbye!

We welcome Idowu Oladipo to the Fluoride Research team. He will be working on a Borrow Foundation sponsored project (2 days a week for 15 months) and will be assessing methods of measuring fluoride exposure in children.

We say goodbye to Dr Jill McKay who has been appointed to a Senior Lecturer post in Northumbria University, and which she took up in February 2018.





# Publications

## Recent HNRC publications



- **Foster E**, Hawkins A, Barton KL, Stamp E, Matthews JNS, **Adamson AJ**: [Development of food photographs for use with children aged 18 months to 16 years: comparison against weighed food diaries - The Young Person's Food Atlas](#) (UK) *Plos ONE*, 2017, 12:e0169084.
- Parkinson K, Reilly JJ, Basterfield L, Reilly J, Janssen X, Jones A, Cutler L, le Couteur A, **Adamson A**: [Mothers' perceptions of child weight status and the subsequent weight gain of their children: a population based longitudinal study](#). *International Journal of Obesity, Advanced online publication* 21 February 2017
- Goffe L, Wrieden W, Penn L, Hillier-Brown F, Lake AA, Araujo-Soares V, Summerbell C, White M, **Adamson AJ** and Adams J. [Reducing the salt added to takeaway food: within-subjects comparison of salt delivered by five and 17 holed salt shakers in controlled conditions](#), *PLOS ONE*, 2016, 11:e0163093.
- Scott S, Parkinson K, Kaner E, Shannon R, Stead M, Power C, Fitzgerald N, Wrieden W, **Adamson A**: [Non-pharmacological interventions designed to reduce health risks due to unhealthy eating behaviour and linked risky or excessive drinking in adults aged 18–25 years: a systematic review protocol](#). *Systematic Reviews* 2017, 6.
- Warner S, Seal C, Haldar S, Stewart G, **Brandt K**. [A project to investigate the effects of carrot and other polyacetylene-rich vegetable consumption on biomarkers of chronic disease risk](#). *Acta Horticulturae* 2017, <https://doi.org/10.17660/ActaHortic.2017.1153.20>, *International Society for Horticultural Science*.
- Qadir O, Siervo M, Seal CJ, **Brandt K**. (2017) Manipulation of contents of nitrate, phenolic acids, chlorophylls and carotenoids in lettuce (*Lactuca sativa* L.) via contrasting responses to nitrogen fertilizer when grown in a controlled environment. *Journal of Agricultural and Food Chemistry*. <https://doi.org/10.1021/acs.jafc.7b03675>
- Verlaan S, Maier AB, Bauer JM, Bautmans I, **Brandt K**, Donini LM, Maggio M, McMurdo MET, Mets T, Seal CJ, Wijers SLJ, Sieber C, Boirie Y, Cederholm T. (2017) Sufficient levels of 25-hydroxyvitamin D and protein intake required to increase muscle mass in sarcopenic older adults - The PROVIDE study. *Clinical Nutrition* <http://dx.doi.org/10.1016/j.clnu.2017.01.005>
- Simpson E, Bradley J, Poliakov I, Jackson D, Olivier P, Adamson AJ, **Foster E**. [Iterative Development of an Online Dietary Recall Tool: INTAKE24](#). *Nutrients* 2017, 9(2), 1-14.
- **Foster E**, Bradley J. Methodological considerations and future insights for twenty-four hour dietary recall assessment in children. *Nutrition Research* (2017) DOI:



10.1016/j.nutres.2017.11.001

<http://www.sciencedirect.com/science/article/pii/S0271531717305869?via%3Dihub>

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- Celis-Morales C, Livingstone KM, Affleck A, Navas-Carretero S, **Mathers JC** et al; [Food4Me Study. Correlates of overall and central obesity in adults from seven European countries: findings from the Food4Me Study](#). *Eur J Clin Nutr*. 2017 Dec 15. doi: 10.1038/s41430-017-0004-y. [Epub ahead of print] PubMed PMID: 29242527.
- Grimaldi KA, van Ommen B, Ordovas JM, Parnell LD, **Mathers JC**, Bendik I et al. [Proposed guidelines to evaluate scientific validity and evidence for genotype-based dietary advice](#). *Genes Nutr*. 2017 Dec 15;12:35. doi: 10.1186/s12263-017-0584-0. eCollection 2017. Review. PubMed PMID: 29270237; PubMed Central PMCID: PMC5732517.
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- **Stevenson, E.J.**, Allerton, D.M. (2017). [The role of whey protein in postprandial glycaemic control](#). *Proc Nutr Soc*. Sep 25:1-10. doi: 10.1017/S0029665117002002.
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- Preshaw PM, Henne K, Taylor JJ, **Valentine RA**, Conrads G. (2017). [Age-related changes in immune function \(immune senescence\) in caries and periodontal diseases: a systematic review](#). *J Clin Periodontol*; 44 (Suppl. 18): S153–S177
- Shilpa Patel, Narges Omid, Fatemeh V Zohoori, Anne Maguire, Kevin J Waldron and **Ruth A Valentine**. [Comparison of total ionic strength adjustment buffers III and IV in the measurement of fluoride concentration of teas](#). *Nutrition and Health*