

# NIHR Bristol Nutrition BRU Newsletter



Welcome to our fifth Newsletter as we look forward to the summer.

I am writing this on behalf of our Director Andy Ness, who is recuperating after a heart attack earlier in the month. Everybody from the BRU, its affiliates and wider community wish him well and a speedy recovery.

It is a credit to Andy, the Executive Group, research and administrative teams that even while the Director is away, the Unit continues to run smoothly and produce high calibre work. The Nutrition BRU is successfully recruiting people into studies,

writing protocols and grant applications, presenting work at international meetings and running and participating in exciting training and public engagement activities. As I recently wrote our annual report, I was impressed at and proud of all we had achieved.

Finally, I would like to welcome Sorrel Burden who has just joined us on sabbatical and Osama Mahmoud who has joined the Statistics Team. I would like to congratulate Andrew Wills on the birth of his daughter Rosa and Katie Berryman on the award of her PhD place at the Integrative Epidemiology Unit.



## Feeding and Autoimmunity in Down's syndrome Evaluation Study (FADES)

By Georgina Williams  
Clinical PhD Student



The FADES study is looking at early feeding in babies and children with Down's Syndrome to see how feeding and early infections may be related to the increased risk children with Down's syndrome have of developing thyroid, coeliac disease (which causes gut problems) and diabetes. We are looking for new parents willing to complete a questionnaire about their

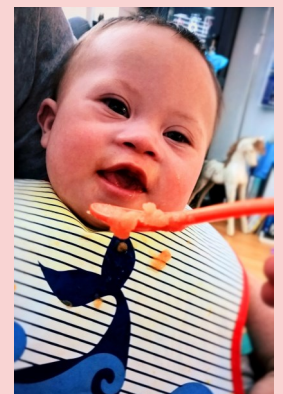
child's feeding and health as a young baby and at six and twelve months. We also ask about the child's health yearly after this until the age of 5 years old. We hope the study will help us understand why children with Down's syndrome are



more likely to experience problems with their hormones and their gut, help reduce this risk and lead to the development of new treatments to help with feeding. We will collect some samples from the baby soon after birth, at six and twelve months and yearly thereafter if possible until the age of 5 years. This would include a stool sample from the mother and baby, a urine sample and heel prick blood. Later on we will collect small samples of blood from the child using a special heel/finger prick sample collector. All questionnaires can be completed online (or paper versions if preferred) at home, and apart from the initial blood sample all samples can be taken at home, or during the baby's routine health checks. Parents would not need any additional hospital attendances, and pre-paid packaging would be provided so that all samples and questionnaires can be sent back to Bristol. We currently have 11 participants and are aiming for 100 in the next year.

The study is led by Professor Julian Hamilton-Shield, Dr Kathleen Gillespie, and Dr Georgina Williams. We are collaborating with the Down's Syndrome Association and Down's Syndrome Scotland.

For more information, go to [www.bristolnutritionbru.org.uk](http://www.bristolnutritionbru.org.uk) and click on the 'FADES Study' tab.



George Armour  
Photographs by Gosia & George (snr) Armour

## Osama Mahmoud joins the Stats team!

By Sam Leary, Senior Lecturer in Statistics

There are now four members of the Statistics Team for the School of Oral and Dental Sciences, Faculty of Medicine and Dentistry; Sam and Andrew work part-time (60% and 40% respectively), while Chris and Osama work full time. Andrew also works 60% time in the School of Clinical Sciences.



**Research:** The team members have wide ranging research interests, but most of their research falls into the following categories: Sam works with members of the Lifecourse Epidemiology and Population Oral Health Research Group and on the BRU themes of Childhood Disorders and Sedentary Behaviours, Andrew works on childhood obesity and growth and the Cleft Research programmes, and Chris works on the Head and Neck Clinical Cohort and the BRU themes of Prostate Cancer and Perioperative Nutrition. Osama joined the team in April 2015, and has started to work on BRU Core projects and the Cleft Research programmes.

**Teaching:** Sam leads Research Methods courses for dental undergraduates (supported by other team members), dental

postgraduates and BRU staff. Sam and Chris are also involved with dental

undergraduate Elective Projects. Andrew leads the Further Research Methods module on the Faculty-level MRes in Health Sciences Research, to which both Chris and Sam contribute. Sam runs a session on confounding for the BRU Nutritional Epidemiology Course for health professionals which ran for the first time this year.

**Links with other statisticians:** The team have regular contact with other statisticians in the Faculty including joint team meetings with those based in the Clinical Trials Evaluation Unit and Bristol Randomised Trials Collaboration, as well as attending the School of Social and Community Medicine statistics seminars and the Health Related Databases group meetings. Sam and Chris also attend relevant national NIHR Statistics Group meetings and workshops.



**Team members (from left to right): Chris Penfold (Research Associate), Osama Mahmoud (Research Assistant), Sam Leary (Senior Lecturer), and Andrew Wills (Lecturer)**



## Amanda Chong visits from Sydney

By Vanessa Marshall, BRU Manager

Amanda Chong, a third year student studying Animal and Veterinary Bioscience at the University of Sydney spent a couple of months during January and February with the BRU on a work placement with Elanor Hinton, Research Associate at the BRU, at CRIC (Clinical Research and Imaging Centre), Bristol. Amanda worked with Elanor using Functional MRIs to study eating behaviours in childhood obesity. Amanda returned to her fourth year in Sydney where she is analysing the NPY1R candidate gene for feeding behaviour in cats to further understand the potential gene function in association with diabetes and obesity.



After leaving the BRU Amanda wrote "I Just wanted to send an email to say thank you for making my placement at CRIC Bristol so lovely. I learnt so much under your wonderful guidance and I am very pleased that I was able to have the opportunity to delve into human studies and see that side of research."

## Sorrel Burden arrives for BRU sabbatical

Sorrel is visiting the BRU and will be here for a total of three months. Sorrel is a dietitian and a clinical academic who works between Salford Royal Hospital and the School of Nursing, Midwifery & Social Work at the University of Manchester.



During her time in Bristol Sorrel plans to visit researchers working with the BRU with the purpose of sharing ideas and thoughts on nutritional research. This will be in conjunction with doing some work within the perioperative theme hopefully involving computed tomography images and some secondary data analysis. This is alongside running a study involving some discreet choice experiments with colorectal cancer survivors. During her stay Sorrel will also be writing some grant applications to develop some collaborations between Bristol and Manchester in nutritional support and metabolomics.



## International Clinical Trials Day

By Clare England, Research Associate



The Bristol Nutrition BRU took part in the International Clinical Trials Day with a stand on the 9th Floor of the BRI, just outside the DeliMarché restaurant. We displayed posters for each of the research themes, highlighted the work done with Patient Public Involvement and made sure that fruit was available for passers-by. A trickle of people came up to the restaurant and those who stopped at the stand engaged in in-depth discussions about the work of the Unit and we even had our photo on Facebook!



## Festival of Postgraduate Research

By Vaneesha Short, PhD student

Our four PhD students, Georgina, Vanessa, Laura and Vaneesha, attended the University of Bristol Festival of Postgraduate Research in April. Together, we created a 'Research Cluster' to show both the diversity of our research and also how our work overlaps and interlinks. The Festival gave us the opportunity to showcase our work and the unit to other research teams, as well as exploring the broad range of research currently under way across the University.



# Update on Industry Collaborations

By Vanessa Marshall, BRU Manager



The Bristol Nutrition BRU has several studies now that involve collaborations with biotech and medtech/devices companies. An example of this is a study with Cambridge Temperature Concepts that starts this month. It involves the development and testing of a cutaneous device to recognise hypoglycaemia in children with diabetes whilst asleep. The final aim would be to produce a device that alerts parents to episodes of hypoglycaemia. Version 2 of the device is currently under evaluation.

We have also recently had provisional ethical approval for another evaluation study of a bio-impedance device for the evaluation of fluid shifts (extra cellular/intracellular fluid) in diabetic ketoacidosis in children with type 1 diabetes to ensure safer resuscitation. The device is made by a British company called Maltron.

Finally, Professor Julian Hamilton-Shield has submitted an initial application and outline to NIHR for an i4i product development award 2015 with Breath Dx UK. The study proposed is an evaluation and validation of a breath ammonia measurement technology for the improved management of patients with urea cycle defects. The BRU assisted in qualitative work relating to PPI.

Our intern, Rhona completed her placement at Nutricia in December and following the success of this, we hope to explore the option of future placements and are investigating the possibility of a jointly funded PhD opportunity.

Our strategic plan for increasing engagement with industry includes utilising our links with secondary care (in particular Bristol Children's Hospital) to identify groups of patients with particular needs for improved disease monitoring to be used in proof of concept device testing and to feedback patient experience to device manufacturers. In March, Andy Ness and Vanessa Marshall attended and spoke at the Academic Health Service Network (AHSN) Nutrition Meeting Campden BRI and Vanessa is going to represent the Nutrition BRU at the Pharmaceutical and Biotechnology Industry Day at Wills Memorial Building, University of Bristol.



# Intercollegiate Course on Human Nutrition, Southampton 23rd-27th March 2015

By Vanessa Marshall, BRU  
Manager



Vaneesha Short (PhD student) and  
Vanessa Marshall (BRU Manager) attended the week long

residential Intercollegiate Course on Human Nutrition run by Southampton BRC, with NIHR funded places. The aim of the course was to gain an understanding of the application of basic nutritional principles and an understanding of the role played by conventional nutrition in the promotion of health and well-being throughout life. The course covered the ways in which under or over nutrition induce adverse consequences. The course was intense and designed so that a different aspect of nutrition was covered on each day with an emphasis on the quality of the evidence for the role of nutrition in health and disease.

Attendees including doctors from medical and surgical specialties wanting formal nutritional training, GPs developing a special interest in nutrition and other professional groups and researchers with a special interest in nutrition

There was also a great opportunity for sharing of ideas with the other attendees. Both Vanessa and Vaneesha benefitted a great deal from the course, and hope to apply their learning to not only their own work, but also share with BRU colleagues.

# Nutritional Epidemiology Course February 2015

By Charlotte Atkinson, Senior  
Research Fellow in Nutrition



In February 2015 the BRU ran, for the first time, a 3-day course titled 'Nutritional Epidemiology – issues in analysis and interpretation of dietary data'. The target audience for the course was people who planned to analyse dietary data in an epidemiological context and who had some experience in quantitative data analysis. On the first day of the course, topics such as dietary assessment methods and biomarkers were briefly

discussed, primarily to underpin some of the areas that were dealt with in the following sessions. Days two and three covered a variety of topics that people working with dietary data should understand, or at least be aware of, when handling dietary data and interpreting the results of analyses. These included measurement error, dietary patterns, and confounding. Sessions on body composition and physical activity were also included within the course given their inter-relationship with dietary intakes. Most of the sessions included some practical / group work to reinforce information that was being provided through presentations.

As this course was being run for the first time, it was run as a pilot. Around 20 people from both within and outside the UK attended the course. We asked all participants to provide feedback as a way of determining whether or not to run the course again, and also as a means of improving it if it were to be run again. The feedback was very positive and some useful recommendations for ways to improve the course were received. We plan to refine the course and run it again in 2016 – watch this space for details of dates, when available!

# British Heart Foundation's 'Wear It. Beat It' coffee morning at the BRU

By Katie Berryman, Trials  
Coordinator



On Friday 6<sup>th</sup> February, the BRU seminar room was transformed with people dressed brightly and homemade cakes (and some

healthy snacks!) adorning the room. The idea was to dress in red and either bring in a cake to sell or spend some money eating the cakes provided. In total over £150 was raised, which was all thanks to Laura Birch who organised this fundraising event.



**Congratulations to Andrew Wills  
and his wife Luisa on the birth of  
their second child, Rosa June,  
born at  
home on  
Saturday  
7th March**

