



News

The following news items illustrate some of our activities during the last 3 months. To keep up to date with our activities, please take a look at our news pages at:

<http://www.food.rdg.ac.uk/news.htm>

29 September 2006: University appoints new Hugh Sinclair Professor of Human Nutrition



Following the promotion of Professor Christine Williams to be the Dean of the Faculty of Life Science, the University has now appointed **Professor Ian Rowland** to take her place as the Hugh Sinclair Professor of Human Nutrition here within the Department of Food Biosciences.

Professor Rowland has been the Director of the Northern Ireland Centre for Diet and Health (NICHE). NICHE is an multidisciplinary research team within the 5* rated School of Biomedical Sciences at the University of Ulster, Coleraine. Its objectives are to advance basic knowledge in the area of nutrition and the relationship between diet and health, and to provide scientific support to the food industry for developing and evaluating new food products.

Ian Rowland has a BSc and PhD in microbiology from University College London and is a Registered Nutritionist. He is on the editorial boards of 5 journals and is the author of over 200 scientific publications. Dr Rowland is a member of the UK Food Standards Agency Advisory Committee on Novel Foods and Processes and is Vice-Chairman of the UK Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment.

His current research areas include the role of diet (in particular probiotics, prebiotics, phytoestrogens, and phytochemicals) in prevention of colon, breast and prostate cancer; the fermentation of non-digestible carbohydrates in the gut and the influence of dietary components on gut function.

He was recently awarded an Honorary Doctorate from the University of Gent for his work on nutrition and cancer risk.

The Department is delighted at this further strengthening of our nutrition research team. The appointment will be from February 2007.

16 September 2006: Gluten research presented to American Association of Cereal Chemists (AACC)

On the 14-16 September, 4 members of the Food & Bioprocessing Sciences Research Group attended the 9th International Gluten Workshop, hosted by the AACC International and held in San Francisco, California. Their work was presented in sessions on

“Biotechnology and Genetics” and “Structure Characterization and Functional Relationships”.

Ana Rodriguez Mateos gave an oral presentation titled “Tyrosine crosslinking of wheat gluten proteins and its functional importance”, while **Luke Clifton** (“Lipid selectivity of puroindolines and the relationship to endosperm hardness”) and **John Lambourne** (“Elucidating the role of low molecular weight glutenin subunits in determining wheat quality”) presented posters. Luke and John attended the meeting with the support of scholarships awarded by the organizing committee. All three contributions will be published as short papers by AACC International.

In addition, Luke Clifton presented at the 232nd National Meeting of the American Chemical Society, also held in San Francisco on the 10-14 September. His work was featured in a session on the “Chemistry of Membrane Interfaces” sponsored by the Division of Colloid & Surface Chemistry.



The picture shows John (left), Ana (centre right) and Luke (right) with their PhD supervisor Dr Richard Frazier (centre left) during a break at the Gluten Workshop. For details of the Gluten Workshop, go to: <http://www.aaccnet.org/meetings/glutenworkshop>

15 September 2006: Student successes at major nutrition conference

The Department was a major player in and successful participant at the Third European Nutrigenomics (NuGo) Conference held at Keble College Oxford, 12th - 15th September.

In the Junior (BSc and 1st/2nd year PhD students) poster session – **Danielle Shaw** received second prize and **Natasha Jeffs** (University of Bath, currently a placement student with our Nutrition Research Group) received third prize for best posters in terms of science and ability to handle questions. **Trevor George** received second prize and **Vanessa Clark** third prize for best posters in terms of quality of communication/ layout/ science message. So Reading won 4 prizes out

of 6 in competition with 22 partners across Europe and a total of 100 posters.

Professor Christine Williams acted as Chair of the Scientific Committee. PhD students **Simon Hughes**, **Vanessa Clark** and **Francesca Favva** were excellent goffers, helping the meeting run well, asking questions during poster sessions, etc. **Anne Marie Minihane** gave a plenary talk, **Julie Lovegrove** and **Professor Williams** co-chaired the session on insulin resistance and **Jeremy Spencer** chaired the session on phytochemicals and human health. **Rafe Bundy** acted as the chief organiser of the meeting with help from **Maria Itta**.

14 September 2006: Australian university welcomes Reading milk researchers

Dr Mike Lewis, Senior Lecturer in the Department, is spending two weeks continuing his research collaborations with Associate Professor Hilton Deeth at the University of Queensland, Australia. The work is mainly related to quality and stability issues in heat treated milk.

Alex Tsioulpas (one of our recent PhD graduates) has taken up a postdoctoral position in the UHT Centre at the University of Queensland and both **Helen Grimley** and **Marianthi Faka** will spend research time in Hilton's very active research group later in the year. Hilton will also visit Reading in November 2006.

13 September 2006: Reading researchers contribute to bubbly discussions



The scenic Lake District was the venue for the “Bubbles in Food 2” conference held at Low Wood overlooking Windermere from 11 to 13 September 2006. The conference was jointly organized by **Professor Niranjana** from the Department, **Professor Leo Pyle** (an Emeritus Professor in the Department), Dr Grant Campbell (University of Manchester) and Dr Martin Scanlon (University of Manitoba).

The topics covered included: Novel processing for bubble containing products, Bubble detection and

quantification, Dairy foams, Bubble stability, Bread proving and Baking, Sensory and textural aspects and the History of aerated foods. Although the topics were predominantly relating to foods, there was an attempt to learn about bubbles in other areas as illustrated by Dr David Pyle's (University of Oxford) talk on bubbles in volcanoes!

Presentations involving members of the Department included:

- Formation and Stability of Milk Foams by Susana Silva and K. Niranjana
- Rheological and Polymer Molecular Structure-Function Relationships in Gluten in Relation to Breadmaking Quality. by Bogdan Dobraszczyk and Wei Li
- Crumpet structures by Leo Pyle

One hundred delegates from all over the world attended the meeting which concluded with a walk around the Langdale valley guided by a local resident, Professor Leo Pyle, with geological commentary by David Pyle.

Further details of the conference can be seen on the Bubbles in Food 2 Conference web site at:
<http://www.umanitoba.ca/bubblesinfood2/index.php>

8 September 2006: School recruits International Student Tutor to support Chinese students

The School is preparing for the arrival of our first group of Chinese students as part of our link programme with Henan University of Technology in China. The students will join the second year of our BSc programmes in October having completed 2 years of preparation at Henan.

In order to help the Chinese students the School has appointed **Dr Cathy Lau** as International Academic Link Tutor for the joint programmes. Her tasks will include the following:

- acting as an academic support tutor for students from overseas (especially China) registered for BSc or MSc Programmes in the Department
- managing the Blackboard site for delivery of distance learning material to students in China before they transfer to Reading
- providing support to the Director of Enterprise in recruitment from overseas universities as required
- participating in the teaching of selected areas of the BSc and MSc degree programmes in the Department of Food Biosciences

Dr Lau, who graduated with a BSc in Food and Nutritional Sciences from the Chinese University of Hong Kong, has been in the UK since 2001. She has

an MSc from the University of Leeds where she has also just completed her PhD research into the rheological properties of foods.

About 20 students from Henan University of Technology are expected to transfer into year 2 of the BSc programmes in Reading in October 2006, and this will be followed by an increased number of students from Henan transferring to BSc and MSc programmes in 2007. It is recognised that these students will face a number of challenges in meeting the standard expected of science students at the University of Reading. Adapting to the UK education system, and to science teaching in the English language, as well as cultural adjustments will provide a challenge for these young people. The position of Academic Link Tutor is a new position designed to provide support for these students in helping them to make a success of their degree programmes.

2 September 2006: Reading participates in EU AquaMax project aiming to maximise the health benefits of farmed fish

A new EU grant 'AquaMax' has recently been awarded to **Dr Parveen Yaqoob**, Reader in Cellular & Molecular Nutrition here in the Department, as part of a 32-partner consortium encompassing research groups from across Europe and from 3 regions of China. The full name of the project is 'Sustainable Aquafeeds to Maximise the Health Benefits of Farmed Fish for Consumers', is worth 10.5 million Euro in total, and is being coordinated by the National Institute of Nutrition and Seafood Research in Bergen, Norway.

The goal of AquaMax is to replace as much as possible of the fish meal and fish oil currently used in fish feeds with sustainable, alternative feed resources that are as free of undesirable contaminants as possible, consistent with maximising the growth performance, feed conversion efficiency, health and welfare of the farmed fish, and maximising the health-promoting properties, safety, quality and acceptability of the final product to the consumer. It will advance analytical methodology to detect very low levels of contaminants in feeds to ensure farmed fish are as low in contaminants as possible. It will assess consumer acceptance of fish farmed on the new diets by conducting taste panel trials and objective electronic sensory evaluations of the final products and then assess the health benefits of the fish produced by conducting studies in pregnant women, focusing on predictors of allergic disease and on the development of immunity in early infancy.

The final phase of the project will assess responses of consumers purchasing the new fish in retail outlets,

and conduct socio-economic analyses of farming fish on the new diets.

Reading will be involved in dietary intervention studies, which are to be conducted in Southampton and in 3 regions of China. In Southampton, pregnant women will be recruited into a study examining the impact of consumption of salmon very rich in omega-3 fatty acids and low in contaminants on maternal and infant health, with particular emphasis on development of immunity, which is Dr Yaqoob's area of expertise. In the Chinese studies, the influence of diet in pregnant women living in areas with a high seafood intake on maternal and child health will be assessed.

7 August 2006: Nutrition Research Group members win ISSFAL awards in Australia

Members of the Department's Nutrition Research Group attended the 7th Congress of the International Society for the Study of Fatty Acids and Lipids (ISSFAL) held in Cairns, Australia from 23 – 28 July 2006.

At this major event, two of our researchers won 2 of only 6 prizes awarded at the meeting. **Bettina Kofler** won the prize for best oral presentation in clinical sciences and **Danielle Shaw** won one of the two poster prizes.

Bettina gave two presentations:

- Effects of Fatty Acids on Noradrenaline Stimulated and Insulin Suppressed Lipolysis and Gene Expression in Human Sgbs (Simpson Golabi Behmel Syndrome) Adipocytes
- The Anti-Inflammatory Action of Modest Dose Fish Oil Intakes in Healthy Adults (The Fingen Study)

and Danielle gave one presentation as well as the prize winning poster:

- Individual Fatty Acid Dose Response Effects on Endothelial Inflammation: Varies with Stimulation State (the presentation)
- Individual Fatty Acids and Inflammatory Gene Expression in Endothelial Cells (the poster)

Congratulations to our two award winning researchers!

Further details of the International Society for the Study of Fatty Acids can be found on their web site at:

<http://www.issfal.org.uk/> The Congress web site can be found at: <http://www.fcconventions.com.au/ISSFAL2006/>

7 August 2006: At London press briefing, Professor Glenn Gibson recommends that the elderly should take probiotics

At a Society for Applied Microbiology press briefing in London on 7 August, **Professor Glenn Gibson**, Professor of Food Microbiology and Head of the Department, said: "The (scientific) literature has reported about 80 human studies with positive results against bowel conditions like travellers diarrhoea, irritable bowel syndrome and antibiotic-associated diarrhoea."

He said, while probiotic products were useful for the healthy population - helping to prevent bacteria which cause food poisoning, such as E.coli or campylobacter, from taking hold, they would be even more beneficial for older people.

However, the researchers also cautioned consumers to check that the products being consumed were effective. Professor Gibson said of about 50 brands available to buy in the UK, about half did not live up to their claims. He said while the larger manufacturers such as Nestle, Danone, Seven Seas and Yakult, made products that were effective, other smaller brands did not.

He also said some "bio-yoghurts" on sale were not the same as probiotics, rather they just had bacteria strains that were useful for making yoghurts. He explained that it was important the product contained the correct strain of live bacteria, such as bifidobacteria or lactobacilli, that they had scientific evidence that the bacteria survived the digestive process, and that there was at least 10 million bacterium in the product.

1 August 2006: New School of Chemistry, Food Biosciences and Pharmacy formed

As part of the University's policy of creating larger administrative units, a new School of Chemistry, Food Biosciences and Pharmacy has been created out of the former three separate Schools. This new structure comes into effect from today.

The three components of the new School have many aspects of their research and teaching in common and the closer working relationships are expected to bring many benefits. However, internally, the three components will retain a separate identity in the form of Departments (although Pharmacy is, exceptionally, being permitted to retain the name 'Reading School of Pharmacy').

The Head of the School is **Dr George Marston** and the Head of the Department of Food Biosciences is **Professor Glenn Gibson**.

18 July 2006: School welcomes first new students from Henan University of Technology



The School today welcomed the first group of our new Henan students to arrive in Reading. They have arrived to take part in some pre-session courses and will enter the second year of our BSc programmes in October.

Seven of the new students were today greeted by **Dr Mike Gordon** (Director of teaching and Learning for the School), **Mrs Glynis Jodrell** (Senior Tutor) and **Professor Niranjan** (School International Director). After a short discussion about the programmes, the new students were shown around the building to see the facilities which they will be using when they start their degree programmes.

The group were joined at the welcome meeting by one former Henan student who came to the School last year

7 July 2006: Summer Graduation and School Prizegiving recognises graduates' achievements and gives Honorary Degree to Heston Blumenthal

The School today was pleased to recognise the success and achievements of its graduates. The graduation ceremony also saw the award of an Honorary Degree to Heston Blumenthal, the 'Worlds Best Chef'. The Graduation ceremony was followed by a prizegiving held in the School's Processing Hall.

Graduation Ceremony

The Summer graduation ceremony is the occasion when the University presents degree certificates to our successful finalists. And this year has seen an excellent set of results with 8 students gaining first class degrees from a total of 33 graduates. Our external examiners were very impressed with the knowledge and skills

displayed by our graduates and fully supported the degree classifications.



The ceremony was also the occasion when three Michelin Star chef, Heston Blumenthal received his honorary degree. Heston Blumenthal was awarded the honorary Doctor of Science degree in recognition for his unique scientific approach to food and long-standing relationship with the School of Food Biosciences.

Professor Donald Mottram, from the University's School of Food Biosciences, stated: 'Heston is one of the best chefs in the world and has achieved international acclaim for his innovative style of cuisine. While he has been developing a novel approach to food at his restaurant, the Fat Duck, Heston has had frequent contact with the School of Food Biosciences and has even been involved with our teaching and research. We are delighted to be awarding him the honorary degree, he is just what science needs - young, enthusiastic, successful, an excellent communicator and a great advocate of practical science.'

Prizegiving



After lunch, the School invited the graduates and their families to a prizegiving ceremony within the School. This was a chance for the School to recognize various outstanding achievements and contributions by the graduates. The prizes were presented to the students by Heston Blumenthal.

Professor Christine Williams spoke briefly about the success of the students and thanked all those who have helped support them during their studies - their families and friend. She also thanked the staff of the School for their work and commitment in maintaining a high standard in their teaching.

Not only were the students given awards. The students used the occasion to recognise the particular help, support and guidance they had received from two members of the School's staff: **Glynis Jodrell** (Senior Tutor and Industrial Placement Coordinator) and **Vina Gillham** (Teaching Office Administrator).

6 July 2006: Large School presence at the Nutrition Society Annual Meeting

On the 3-6 July, 11 members of the School's Nutrition Research Group attended the Annual Meeting of the Nutrition Society which was held this year in the Aberdeen Exhibition and Conference Centre. The conference theme was 'Interaction between genetics, diet, health and disease'

Dr Julie Lovegrove and **Dr Anne M Minihane** gave symposia lectures in the areas of 'Dietary Interventions for Ethnic Minorities' and 'ApoE genotype, chronic disease risk and responsiveness to dietary change', respectively. In addition **Dr Orla Kennedy**, **Dr Jeremy Spencer**, **Danielle Shaw**, **Trevor George** and **Clara Law** (a recent BSc Food Science graduate) gave oral communications. A big congratulations to Danielle for winning, out of a field of 27, the best student presentation award, with her talk on 'Fatty acids differentially affect endothelial inflammatory gene expression'. Also Eliz Anil was chosen to present in the prestigious postgraduate symposium, held on Wednesday afternoon, which will lead to a full publication in the Proceedings of the Nutrition Society.

In addition to a great week of nutritional sciences the group enjoyed the Scottish hospitality and their Ceili dancing skills are much improved!

We are also pleased to report the election of **Dr Orla Kennedy** to the Council of the Nutrition Society.

5 July 2006: Successful summer schools for 6th formers and teachers

The 20th annual summer school for sixth formers was held from 3rd to 5th July in the School of Food Biosciences. Sixty-four students, studying A level sciences, from schools and colleges in all parts of the

country and, for the first time, from overseas were sponsored to attend by food manufacturing and retailing companies and the Institute of Food Science and Technology. They were accommodated in Windsor Hall and carried out a range of practical and project work. Some highlights of the course were:

- A demonstration of the science behind recipes used at the Fat Duck restaurant by Chris Young (Research Chef).
- The Marks and Spencer / Northern Foods business game.
- Practical project work and presentations with prizes awarded by Tesco Stores Ltd.

There was also a careers session, which highlighted the wealth of opportunities available to food science and technology graduates in the food industry. Teachers were invited to attend the second day of the course where they could take part in practical exercises and attend lectures.



The aims of the two courses are to demonstrate that food science and technology are serious disciplines involving good scientific ability. Students capable of achieving science A levels should consider a career in the food industry and the School of Food Biosciences in Reading is an ideal place to start on such a career!

Feedback questionnaires showed that the course was much enjoyed by all and sixty percent of respondents indicated that they were likely to apply for degree programmes in the School of Food Biosciences, which should contribute significantly to student recruitment for 2007 and beyond.

The courses were organised by **Alistair Grandison**, **Glynis Jodrell**, **Anne-Marie Minihane**, **Richard Frazier** and **Vina Gillham**, and involved staff, students and former students of the School of Food Biosciences plus other representatives of the food industry.

Details of our next course in July 2007 will be available on our web site in due course. The photographs show two of the students doing an experiment and a group of teachers during their workshop.

5 July 2006: More success for our students!

Two of our students have received awards for their work:

Our first winner is **Edna Nyangale**, a third year undergraduate student on our Food Science with Business programme. She has been awarded the British Society of Flavourists (BSF) Bursary Essay award for 2006. The competition was open to all students, including recently qualified BSF Student Members. The prize was awarded to the student who best responds in essay form to a flavour related subject chosen by the Society. The title for this year's essay was "Flavours & well-being. How do flavours contribute to our enjoyment of food & drink?". Edna wins £1,000 for her essay which will be presented at the October BSF meeting here in Reading.

Our second winner is **Mai Low**, one of our PhD students. She has won the best student presentation award at the 2006 Royal Society of Chemistry: Food Group Conference for Post-Graduate Research Students. The conference was this year held in Leeds on the 4th and 5th July. It provided a forum for students from all branches of food science to present their research and to network with other postgraduates and academics from UK universities and institutes. This is Mai Low's second recent success - she won a similar award at a conference in the USA in April.

Congratulations to them both!

Our Degree Programmes

The **Department of Food Biosciences** offers the following programmes

- **BSc Food Science;**
- **BSc Nutrition and Food Science;**
- **BSc Food Technology;**
- **BSc Biotechnology;**
- **BSc Food Science with Business**

- **MSc Food Science;**
- **MSc Food Technology Quality Assurance;**
- **MSc Nutrition and Food Science**

- **PhD, MPhil - Research degrees**

For full details, visit our web site at:
<http://www.food.rdg.ac.uk/index.htm>