



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>

21 December 2004: Christmas Greetings from Professor Williams, Head of School



Myself and the school management group would like to wish everyone in the school - staff and students - a very happy Christmas.

It has been another challenging and eventful year. We have had an excellent year for research income (total research income has been £2.19m with an additional £257,000 from Knowledge Transfer Partnerships). We submitted 126 refereed papers to the Annual Report and 18 students received their PhD degrees. In the three year Operating Plan we have predicted an increase in overseas students of 50 p.a and of home students (via Nutrition/ Food Science and Pharmacy) of 40-50 p.a. by 2007. If we achieve this then the future of Food@Reading is secure and all your hard work will have ensured that Reading continues as the premier School of Food Biosciences in the UK.

16 December 2004: 8th Annual Christmas dinner cooked by the Professors!



Once again, staff and research students were able to enjoy the hospitality of the School's professors and other members of the senior management team with a festive Christmas lunch. A special guest was Professor Robson, Dean of the Faculty of Life Sciences, who looked after the cooking of the sausages before joining the meal.

The School's processing area was the venue for the event which saw about 150 people sitting down to enjoy a traditional Christmas meal with a selection of meats, roast potatoes and other vegetables.

7 December 2004: Dr Mike Gordon visits Chiang Mai University, Thailand

As part of our developing links with Chiang Mai University in Thailand, Dr Mike Gordon, Director of Teaching and Learning in the School of Food Biosciences has spent a week at Chiang Mai.

During the visit, detailed discussions were held on our planned collaboration and the launch of an MSc degree. Although our plans had been for a Reading degree to be taught by staff and Chiang

Mai with the research project being done in Food Biosciences at Reading, it has now been agreed that the collaboration should take the form of a joint degree (i.e. awarded jointly by the two institutions). Unfortunately, as this will require further approval by both institutions, the first intake into the programme will be delayed until May 2006.

3 December 2004: Final year students show off their product development work



Each Autumn, as part of their final year programmes, all of our food students have an opportunity to participate in a Product Development exercise. Students, working in small groups are given a general brief to devise a competitive product meeting certain broad requirements.

The module, involving input for manufacturing and retail companies, always provides an exciting range of new product ideas, attractively presented and with consideration being given to the manufacturing requirement and with a high emphasis on the requirements for consumer safety.

2 December 2004: School's new advisory boards meet for the first time

Following a review of the structure of our advisory board and the work that it had been doing, the School made recommendations to the University for the ending of the rather formal status given to the Board and its replacement by two committees with a more active role in the School - one will focus on research and one on teaching and professional development. These committees have met for the first time today.

The Science Research Board has the following external members: Professor David Richardson, DPR Nutrition; Mr Clive Woolley, RHM Technology; Dr. Julian M Cooper, Head of Food Science, British Sugar plc; Dr Jan Van Loo, Orafit Group, Belgium; Dr David Thomson, MMR Food & Drink Worldwide Research Ltd; and, Dr Josephine M. Wills, Head of Scientific & Regulatory Affairs, Europe, Masterfoods.

The Teaching and Industrial Professional Training Board has the following external members: Dr Phil Camburn, SmithKline Beecham Consumer Products; Mr Duncan Ford, Samworth Brothers Ltd; Mr Peter Holland, J.Sainsbury plc; Miss Jodi Steers, Marks & Spencer plc; Ms Jenny White, Kerry Ingredients Ltd; and, Dr Judy Buttriss, British Nutrition Foundation.

Once a year, the Boards will meet in a combined session where matters relating to both Boards will be discussed. In welcoming the start of the new Board structure, Professor Christine Williams, Head of the School of Food Biosciences, stressed the important role of external advice to the work of the School and looked forward to fruitful discussions within both Boards.

1 December 2004: School role in new research into the Metabolic Syndrome

Both obesity and type 2 diabetes have become global epidemics over recent decades bringing, in their wake, a number of metabolic symptoms and cardiovascular disease risk factors. Both of these disorders, however, are just the tip of the iceberg, being just two manifestations of the 'Metabolic Syndrome' which has been suggested to affect 25% of the adult population in countries such as the UK, and has severe consequences for both public health and the economy. Research is being conducted across Europe to help tackle the metabolic syndrome and its associated complications. Scientists at Reading play a major role in that research.

Research is under way across Europe to establish the role of diet in the development of the metabolic syndrome and ways in which its prevalence and associated complications can be reduced, through the foods and diet that we eat. This research is being conducted by a pan European consortium of 24 research partners and is known as the Lippene project

Professor Christine Williams, Head of the School of Food Biosciences, is undertaking research for the Human Nutrition 'arm' of the Lippene project. Professor Ian Givens, Director of both the Nutritional Sciences Research Unit and the Centre for Dairy Research in the School of Agriculture, Policy and Development, is undertaking research for the Animal Nutrition 'arm'.

1 December 2004: New research sponsored by the Australian Dairy Industry

Dr Mike Lewis and Dr Alistair Grandison have obtained a research grant to fund a PhD student, based mainly in Reading for three years from the Dairy Ingredients Group of Australia Ltd (DIGA). The subject is the role of ionic calcium and other minerals on milk stability.

The project is in conjunction with the University of Queensland (UQ), Brisbane and is designed to strengthen links between Reading, UQ and DIGA. The project results from earlier collaborations through Professor Hilton Deeth (UQ) spending three months in Reading from September to December 2003 and his PhD student Sangeeta Prakash working for 10 weeks in Summer 2004. It also follows a visit made by Martin Palmer, (Chief executive officer, DIGA) to Reading in October 2004.

Mike Lewis has also won a travel award from UQ and will spend 7 weeks there in March-April 2005. The PhD student will be expected to spend about 6 months of the program working in Australia.

26 November 2004: Andrew Wilbey appointed President of the Society of Dairy Technology

Andrew Wilbey, a lecturer in the School of Food Biosciences, has been appointed as President of the Society of Dairy Technology. Andrew joined the School of Food Biosciences having worked for several years in the dairy industry. At the University he has maintained this specialism with work on dairy products and, in particular, ice cream.

The Society of Dairy Technology is dedicated to the advancement of dairy science and technology across all areas of the agri-food sector, to the mutual benefit of milk producers, dairy processors, food retailers and consumers, by the dissemination, and application, of knowledge gained from experience and experiment. Its primary publication is the International Journal of Dairy Technology.

16 November 2004: Visits to Taiwan help strengthen research links with National Pingtung University of Science and Technology



A series of symposia are being held as part of the events to mark the 80th anniversary of the founding of the National Pingtung University of Science and Technology, Taiwan. The School has close links with the University through a former PhD student, Dr Mei-Jen Lin.

Dr Mike Lewis has just returned from participation in one of the symposia. The subject of his paper was "Raw milk quality and its role in the safety and quality of heat treated milks". This week, Dr Alistair Grandison is in Taiwan giving a paper on "Manufacture and Purification of Prebiotic Oligosaccharides" and, in early December, Dr Niranjana will also be visiting and giving a paper on "Engineering Challenges in Modern Food Manufacturing"

The National Pingtung University has strong research programmes in flavour science, milk stability, prebiotics and probiotics and biotechnology. We hope that the attendance of our staff at these anniversary symposia will further strengthen our relationship with the University.

4 November 2004: BSc Nutrition and Food Science now recruiting!

Official approval has now been given to the launch of our new degree programme - BSc Nutrition and Food Science. Following a detailed scrutiny of our proposed degree by a panel including external assessors, the Faculty Board has given the green light to this expansion of our programmes. The BSc programme will be accepting students from October 2005.

The School has been expanding its work in areas of nutrition and health. We launched our MSc Nutrition and Food Science in 2000 and our increasing activity now enables us to provide an undergraduate programme combining studies in nutrition with our more traditional food science.

The combination of the two areas will provide graduates who will be of great value at a time when consumers are increasingly interested in the functional properties of foods.

2 November 2004: Prizes for excellent student performances

Congratulations to Chris Armah for winning the student competition for the best presentation at the Oxford Nutrition Group's 10th Anniversary meeting held in Oxford yesterday. Chris is a research assistant studying for a PhD degree. The title of his talk was 'Dietary fat and vascular tone'. He is working with Dr Anne Marie Minihane.

Two of our new second year students have been awarded Prizes as a result of their excellent performance in their Part 1 examinations:

- Miss Sonam Sanghi, studying Biotechnology, achieved the best results in the Faculty of Life Sciences and was awarded the Ede and Ravenscroft Faculty Prize.
- Miss Jessica Jin, studying Food Science, achieved the best results for a student on a food related programme and was awarded the Sainsbury's Prize.

Congratulations to them all!

1 November 2004: School welcomes visitors from Henan University, China



As part of our developing link programme with Henan University, the School welcomed 3 members of their staff to the School. Henan University of Technology (HUT), formerly Zhengzhou Institute of Technology, is running a 2 year international programme from which students can progress onto the second year of BSc degree programmes within the School. The first students from this programme will come to Reading in October 2005.

The visit today was part of the preparation for the arrival of the new students. The picture shows (from left to right): **Mr Wilbey** (SFB), **Xaixi Wang** (Associate Dean and Associate Professor, HUT), **Lan Kuang** (Vice President and Associate Professor, International College, HUT), **Professor Williams** (Head of School, SFB), **Professor Lou Yuangong** (Vice President, HUT) and **Dr Gordon** (Director of Teaching and Learning, SFB) .

30 October 2004: Dr Niranjana appointed to the Executive Committee of EFFoST

Dr Niranjana, a Senior Lecturer in Food and Bioprocess Engineering in the School of Food Biosciences, has been appointed to the Executive Committee of the European Federation of Food Science and Technology (EFFoST)

EFFoST is a non-profit association, with 80 societies in 21 European countries affiliated to it. EFFoST has become a focus for European cooperation among food scientists, engineers, technologists and businesses in food and food-related areas. The activities of EFFoST are co-ordinated by the Executive Committee and a General Assembly with members drawn from industry, academe and government.

28 October 2004: Presentation to Glaxo SmithKline Scholarship Students



Two of our new first year students were today presented with their first year scholarship cheques as a result of the sponsorship from Glaxo SmithKline. Dr Phil Camburn, GSK's Research and Development Director and a former graduate of the School spoke to the first year students before presenting Emma Childs and Michael John with their cheques.

26 October 2004: Graduate PhD Student becomes new Indonesian Minister of Agriculture

Following the recent elections in Indonesia, a new government has been appointed and Dr Anton Apriyantono has been appointed the new Minister of Agriculture.

Dr Apriyantono obtained his PhD in the School of Food Biosciences (then the Department of Food Science and Technology) in 1992 under the supervision of Professor Jenny Ames. More recently, in 1998, he spent a further 6 months in the School as an Academic Visitor. We wish him well in his new post.

20 October 2004: Science behind the sauce



Visitors to the weekly Food Sciences seminar may have been forgiven for wondering why the chef-proprietor of the Fat Duck restaurant in Bray, Berkshire, Heston Blumenthal, was invited to speak.

However, Heston, who won his third Michelin star in January, takes a keen interest in the science behind cooking and has been a colleague of Professor Don Mottram's since they met at a science conference in Geneva. Heston uses his knowledge of science to enhance many of his dishes: "I like to take a different approach to cooking", he said. "Science is married to the quality of cooking and a knowledge of food science led me to question classical food and cooking theories".

The audience was treated to demonstrations and tastings of how ice cream and fizzy fruit can be created with liquid nitrogen, and how perfect stock and crispy chips are produced in a vacuum chamber. His experimental approach to food has led Heston to combine such flavours in his dishes as pine and mango, white chocolate and caviar and visitors to the Fat Duck are able to experience the taste of leather and oak as part of their meal, for example. "When you

know the science behind aroma compounds you know which food pairing combinations will work," said Heston. "The next barrier is to overcome the preconceived perceptions people have about the unfamiliar taste and look of new food".

15 October 2004: New test bakery laboratory opens



The School of Food Biosciences has reorganised part of its main food processing laboratory to provide a new laboratory for flour milling and baking experimental work. The equipment allows researchers to take a small batch of cereal (wheat, for example), to mill it into flour and to then bake experimental batches of bread. This allows the quality of the wheat to be assessed under tightly controlled laboratory conditions. A range of equipment allows a variety of experimental techniques and analyses to be conducted.

Additional reorganisation is planned as part of the decision by the University to develop a School of Pharmacy. The School of Food Biosciences is involved in this development as it will allow for increased links between food, diet and health - an area in which the School is already strong.

11 October 2004: New research project to investigate effect of bakery ingredients on the stability of bubbles in dough and the creation of texture in bakery products

Funding has recently been agreed by the Department of the Environment, Food and Rural Affairs (DEFRA) as part of their LINK scheme to support a new project which will investigate the effect of bakery ingredients on the stability of bubbles in dough and the creation of texture in bakery products. Dr Bogdan Dobraszczyk, a Research Fellow in the School of Food Biosciences is leading the research consortium which will conduct the research.

This project aims to investigate the physical mechanisms responsible for maintaining and stabilizing bubble growth in the aerated structure of baked products. The actions of surfactants, enzymes, fats, oxidants (including oxygen), bran and aleurone components and their interactions with gluten and starch on the creation of bubbles in dough during mixing and their subsequent evolution during proof will be studied. This work will bring together a number of recently developed techniques which allow the *in-situ* measurement of dynamic changes in dough properties, structure and bubble stability as they occur during the baking process, under relevant conditions of deformation and temperature.

The project consortium includes The University of Reading, The University of Manchester (formerly UMIST), Air Products, Bakemark UK, Branscan, Danisco, Puratos, RHM Technology, Satake UK, Stable Micro Systems.

11 October 2004: Dr Spencer gains new MRC New Investigators Award

The School is delighted to announce that Dr Jeremy Spencer has been awarded one of the new Medical Research Council's New Investigator Awards. Only five have been awarded across the whole country and two were given to the University of Reading.

The research will be looking at the progression of neurodegenerative diseases that have been shown to involve an element of oxidative stress which is commonly accompanied by decreases in small molecule antioxidants. One example of this is the large decrease in reduced glutathione (GSH) observed in Parkinson's disease. Here the oxidation of dopamine to yield o-quinone species can lead to the formation of neurotoxic species following reaction with cellular thiols, including GSH. This research will firstly strive to discover the precise mechanism of this neurotoxicity. At the same time there has been much recent interest on the potential neuroprotective effects of flavonoids, which have been shown to protect against age-related cognitive and motoric decline. The second aim of the research is therefore to investigate the potential of flavonoids and their physiological flavonoid metabolites to provide protection against neuronal damage. In this way the research has implications for exploiting the potential health beneficial roles of the flavonoid components of the diet, through understanding the ways in which specific flavonoids modulate signalling processes and protect against neuronal death.

Also very highly rated in the assessment of the applications was another member of the School, Dr Anne McCartney from the Schools Food Microbial Sciences Unit.

5 October 2004: Institutional Audit report praises School's strong links with industry

In May 2004, the University of Reading was subject to an 'Institutional Audit' by the 'Quality Assurance Agency'. During the Audit, a few selected Schools were subject to a more detailed audit to determine how University policies are implemented at School level. The final report has just been published.

As an example of 'good practice', the University as a whole was praised for "the variety of links with industry, professional bodies and practice used to inform the curriculum, assist student employability and support research." Information gathered during the discussions with the School was used as a key example of how this is achieved.

With reference to the School, the report also noted: "Student evaluation of the programmes was positive and the students expressed satisfaction with the academic support and learning resources available to them. There was clearly a good relationship between the staff and the students."

4 October 2004: New term starts - welcome to our new students

The School is delighted to welcome all our new students who have joined us this session.

5 of our undergraduates have been allocated scholarships. Our top 2 new students (based on A-level grades) have been awarded scholarships from SmithKline Beecham which will provide £1,100 for each of their 3 years of study. A further 3 awards have been made by the School to provide £1,100 to 3 further students who also achieved high A-level grades. Although most of our

undergraduates are from the UK, our intake includes students from China, Mauritius, Zimbabwe and Greece.

Our MSc intake has a strong international representation with students from Botswana, China, Cyprus, Ghana, Greece, India, Iran, Kenya, Malaysia, Nigeria, Pakistan, Poland, Singapore and Spain.

30 September 2004: Support to the Albanian Ministry of Agriculture and Food

Dr David Jukes has returned from a 2 week visit to Albania as part of a European Union project to support the work of the Food Control Directorate within the Ministry of Agriculture and Food. This was the third and final visit for Dr Jukes who specialises in food law and regulation. During the visits he has provided the expertise to assist in the drafting of a new food law for Albania as well as drafting regulations for food labelling and food additives. The country, one of the poorest in Europe, is wishing to eventually join the European Union. The project provided some essential support in helping achieve this.

22 September 2004: Food Microbial Sciences Unit (FMSU) moves into the School



This week has seen the completion of a major investment by the University of Reading. Previously housed in laboratories on the other side of the University campus, the Food Microbial Sciences Unit (FMSU) has now moved into refurbished facilities within the main Food Biosciences Building.

The photograph shows the new laboratory which has been specially designed to provide space for the team of researchers working as part of the FMSU. Additional space has also been used to provide office space for the researchers and their support staff.