

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>

27 June 2005: Two Reading graduates gain Knowledge Transfer Partnership posts with food companies

With new graduates from all over the UK seeking jobs, competition for good positions can be intense. However two Reading graduates have been able to beat the competition to gain positions as Knowledge Transfer Partnership (KTP) Associates.

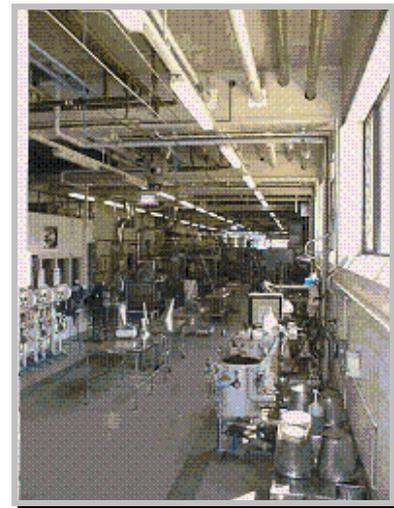
Victoria Batty (a Food Technology graduate) has been appointed Associate with Taste Trends Limited. The company, based in South London, was founded in 1994. They manufacture machine vended frozen yoghurt and fruit smoothies under the brand name "Coolicious". Victoria will be helping them to implement more rigorous quality control procedures, and help them expand their product range and improve the nutritional attributes of existing products.

Ayisha Nugent (a Food Science graduate) has joined Square Pie Ltd. The company, based in East London, is a producer and retailer of gourmet pies. The programme aims to improve current processes (including new product development and productivity), to increase shelf-life through the use of innovative packaging and manufacturing processes, and plan and instigate new production facilities to cater for increased future demand.

The Knowledge Transfer Partnership (KTP) scheme is a UK government initiative which provides funding for small companies to access modern science and technology and apply it to help develop their business. In recent years, the School has been very successful in obtaining and participating in many such links. As well as helping the food companies, the scheme provides staff with an excellent opportunity to see the practical application of techniques developed in the School's laboratories.

More details of Taste Trends can be found on their web site at: <http://www.tastetrends.co.uk/index.htm>. More details of Square Pie Ltd can be found on their web site at: <http://www.squarepie.com/>

22 June 2005: Open Day attracts nearly 50 industrial delegates to Pilot Plant



A 'Product and Process Open Day' attracted nearly 50 industrialists from food companies. The day emphasised the links between a number of key issues - in particular, the development of products for today's nutritional issues.

The School of Food Biosciences has the largest pilot plant facility in any UK University food department and it is extensively used by industry. Industrial use is organised through the Process Research Centre (PRC), a joint initiative linking the School to Reading Scientific Services Ltd (RSSL).

Two exhibitors provided additional interest for delegates. One, Winkworth Ltd manufactures food processing equipment for product development work and Alchem manufactures functional food ingredients.

Further details of PRC can be seen on their web site at: <http://www.rssl.com/OurServices/PilotPlantFacilities/>

17 June 2005: University announces new scholarship scheme for undergraduate students in Food Biosciences for October 2006

For entry in October 2006, the School of Food Biosciences will be offering University Entrance Scholarships to high achieving entrants. These will consist of a single payment of £2000 (in two instalments) during the first year of entry.

These awards will be available to all entrants who hold Reading's offer as firm choice through UCAS and who achieve three A levels with Grades ABC or BBB (subject non-specific).

The School is one of the first at Reading to be allocated these Scholarships for 2006.

For more details see the University Scholarship page at <http://www.rdg.ac.uk/studentfinance2006/>

15 June 2005: 'Nutrition and Food Science' degree programmes gain accreditation from The Nutrition Society

The School is delighted to announce that its two programmes focusing on nutrition have been accredited by the UK's Nutrition Society. The two programmes are:

- BSc Nutrition and Food Science
- MSc Nutrition and Food Science

Graduates from these degrees will be able to apply for membership of the Society's Register and membership constitutes formal recognition of professional competence

The purpose of the Register is to protect public health. It comprises a list of appropriately qualified persons and in so doing, distinguishes individuals who have received an approved level of training from others who have not. At the same time, the existence of the Register provides a source for those seeking advice or offering employment on nutrition subjects.

Further details can be found on the site of the Nutrition Society at <http://www.nutritionociety.org/> or go direct to the Registration page at: <http://www.nutritionociety.org/membership/reg/registration.html>

9 June 2005: Leading Food Engineer gains promotion to become Professor of Food Bioprocessing

The School is once again able to congratulate one of its staff on gaining promotion. **Professor Keshavan Niranjan** had been promoted to a personal chair as Professor of Food Bioprocessing.

After completing a PhD at the highly reputed chemical engineering department at the University of Bombay, he continued there as a lecturer in Chemical Engineering between 1980 and 1984. He then worked as a Post Doctoral Research Associate in the Department of Chemical Engineering at the University of Cambridge between 1984 and 1989 before joining the School as a Lecturer in October 1989. In October 1998 he was promoted to a Senior Lectureship in Food and Bioprocess Engineering.

Professor Niranjan is a leading international authority on modelling food processing operations which involve mass transfer, heat transfer and mixing in multiphase systems. The strength of his research portfolio is characterised by scientific leadership in two specific areas of food processing: "bubbles in foods" and "mass transfer from cellular tissues". He has had external financial support for research (worth over £1 million) from both research councils and industry. He recently became involved in enterprise activity when, in August 2003, the University's Research and Enterprise division filed a patent application for his invention of a novel food packaging concept.

He has over 90 publications in high impact factor international journals, key conference proceedings and books. Several papers reflect strong collaboration with colleagues within the University and internationally. He has supervised 14 successful PhD candidates and 8 post doctoral researchers. Currently he leads a strong research group consisting of 7 PhD students, with funding support from Nestle and Yoplait.

Finally, Professor Niranjan is a subject editor for the Transactions of the Institution of Chemical Engineers, and a senior office holder within certain European and international learned societies.

Congratulations from us all in the School to our new Professor!

5 June 2005: Student participation in Community Service Volunteer work

Several of our current students have this year been involved in Community Service Volunteer work arranged through the University. Both undergraduate (BSc) and postgraduate (MSc) students have joined the scheme. One of them, **Feyishayo Ashipa**, an MSc Food Technology – Quality Assurance student from Nigeria has provided this report:

"I carried out the scheme at a Primary School in Woodley, part of the suburbs of Reading. My experience as a CSV student tutor was challenging as well as rewarding. It is an experience which I will have memories of for years to come.

"I began my duties as a student tutor on the 14th of February, 2005 and continued, with breaks for vacations and examinations, until the end of May. I attended the school one afternoon each week.

"No two days at the Primary School were ever the same. There was always variety in the course work and this helped to keep the student's interest in their studies. Students were also encouraged to develop their natural talents and creativity. Whenever the class was given a task to do, general guidelines were given by the teacher after which the students were allowed to come up with their own ideas and apply these ideas to the task.

"The more time I spent tutoring the more exciting it became for me. I was allowed to have access to the staff room like a regular staff of the school and was given the freedom to take refreshments from the staff room at will. The last days of my tutoring were really relaxing, entertaining and emotional.

"My final day was a very emotional day for the children and me. They children made cards for me which contained wordings such as: We will miss you; We'll be thinking of you; Good luck; We will miss you, thank you for helping us.

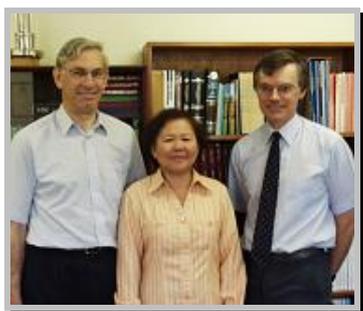
"I was really moved. Some of the children also made souvenirs for me. My days as a tutor has truly been rewarding. It is so

great to know that your efforts are appreciated and people are truly touched by you. I am truly fulfilled."

Well done to Feyishayo and our other CSV volunteers.

Further details of the scheme organised by the University Widening Participation Office can be found at:
<http://www.rdg.ac.uk/csv/>

3 June 2005: Visit of the Head of Department of Food Science and Technology at Chiang Mai University in Thailand



The School is this week being visited by **Dr Arunee Apichartsrangkoon**, Head of the Department of Food Science and Technology at Chiang Mai University in Thailand.

The School has links going back many years with Thailand and Chiang Mai in particular. In fact, several years ago Dr Apichartsrangkoon gained her PhD whilst working in the School of Food Biosciences. The current visit is part of our continuing research collaboration with Chiang Mai involving several PhD research students undertaking some or all of their research at Reading.

In addition, during the visit, further work is being done on the development of a Joint Masters degree in Food Science and Technology based in both Chiang Mai and Reading. It is hoped that the new 'international' programme will be ready to take students in April 2006.

The photograph shows **Dr Mike Gordon** (Head of Teaching and Learning in the School) and **Dr David Jukes** (MSc Programme Manager) with Dr Apichartsrangkoon at the start of these discussions.

For further information on our links with Chiang Mai, go to our Chiang Mai University page.

27 May 2005: Successful Reading graduate to join Queen's University, Belfast, as Professor of Food: Human Nutrition and Health

It has been announced that **Professor Jenny Ames** will be leaving the School of Food Biosciences on 30 June to take up the new Chair of Food: Human Nutrition and Health at Queen's University Belfast on 1 July.

Jenny first joined the then Department of Food Science in 1976 as an Undergraduate student. After graduating with First Class Honours in Food Science, she moved to Queen Elizabeth College (London University) which had awarded her a Open Scholarship to study for a PhD in flavour chemistry. After a two-year stint as a Postdoctoral Research Fellow in London, Jenny returned to

Reading to undertake postdoctoral research on coloured compounds formed by the Maillard reaction (in collaboration with Professor Harry Nursten). In 1985 she moved to the Polytechnic of the South Bank in London to lecture on Food Chemistry and Instrumental Analysis. In 1986 she returned to Reading as a Lecturer and was subsequently promoted to Reader in Food Chemistry in 1995 and Professor of Nutritional Chemistry (Personal Chair) in 2002.

Jenny's research interests focus on the Maillard reaction and protein glycation. Her early interests in flavour and colour chemistry developed to include food processing factors affecting the Maillard reaction and the chemistry of Maillard reaction products possessing antioxidant activity. Her major contributions to research in these fields led to the award of her Chair. In the last five years, she has placed considerable emphasis on reactions between protein and sugars and protein and lipid oxidation products. In 2002, Jenny undertook a sabbatical in the laboratory of Professors John W Baynes and Suzanne R Thorpe at the Department of Chemistry and Biochemistry, University of South Carolina, USA, where she is now a Visiting Professor. This highly successful and productive collaboration allowed Jenny to take a proteomics approach to the analysis of carbonyl-modified proteins.

In 2003, Jenny and collaborators Professor Glenn Gibson (Food Biosciences) and Professor James Crabbe (Animal and Microbial Sciences) were awarded the first School Wellcome Trust Project Grant to study the effect of glycated protein on the growth of colonic bacteria obtained from ulcerative colitis patients and healthy subjects. Jenny has won more than £2 million research funding from the BBSRC, LINK, Teaching Company Schemes, FSA, EC, BHF, Wellcome Trust and industry. She has published more than 120 refereed papers and four books. In 1995, Jenny was awarded the Royal Society of Chemistry Food Group Junior Medal.

At Belfast, Jenny will be a founder member of the new School of Agri-Food and Land Use. She will establish and lead research programmes at the interface of food and health.

The School wishes Jenny well in her new post and is grateful for her various contributions over nearly 30 years. Following Jenny's resignation, the School is seeking University approval to make an appointment. Further details will be available in due course

11 May 2005: Promotion to Professor of Biotechnology for Bob Rastall



From his first appointment in the School in 1993, **Bob Rastall** has been one of our most active researchers. He was promoted to Senior Lecturer in Food Biotechnology in 2002 but his continuing success has now led to a further promotion to Professor of Biotechnology.

His main specialist area is research on novel functional food ingredients with expansions into promising new areas. In total he has attracted a research income of over £1.5 million, of which over £700,000 has been raised since 2002. His research programme has established the feasibility of developing functional food ingredients specifically targeted at certain disease states and population groups. In addition, he has pioneered novel manufacturing approaches required for these "second generation" ingredients which are now undergoing further research and development.

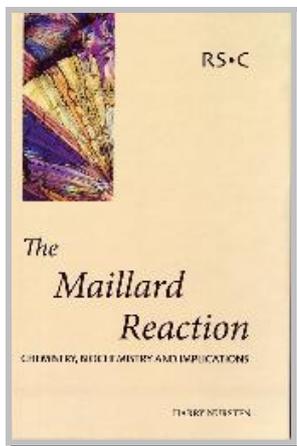
Within the School of Food Biosciences, he now leads the Food and Bioprocessing Sciences group (FaBS) which was formed by the merger of the Biotechnology and Food Processing Sciences and Food Molecular Sciences research groups. Since taking charge of FaBS, he has developed the group research strategy around food processing for health outcomes, particularly functional foods.

His research has gained significant international recognition in recent years. He is regularly invited to present his work at international conferences and he is called upon to provide consultancy services to industry. He is a board member and founder member of the International Scientific Association of Probiotics and Prebiotics (ISAPP). He is Convener of the Food and Beverages Group of the Society for General Microbiology (SGM).

As part of his international activities, Professor Rastall recently made a trip to Thailand. He conducted a PhD viva at the Prince of Songkla University and subsequently gave an invited lecture at the BIOTEC Centre in Bangkok.

Congratulations to Bob from us all!

10 May 2005: Professor Nursten's new book on the Maillard Reaction now published



Many graduates and friends of the School will be delighted to know that **Professor Harry Nursten** continues to be very active in the world of food chemistry. Having officially been appointed an Emeritus Professor in 1992, Harry has continued to attend the School most days. One of the results of this work is the publication of a new book providing a fully up-to-date perspective on the Maillard reaction.

Research in the field of the Maillard reaction has developed rapidly in recent years not only as a result of the application of improved analytical techniques, but also the realisation that the Maillard reaction plays an important role in some human diseases and in the ageing process.

'The Maillard Reaction: Chemistry, Biochemistry and Implications' provides a comprehensive treatise on the Maillard reaction.

Written solely by Harry Nursten, this single-author volume covers all aspects of the Maillard reaction in a uniform, co-ordinated, and up-to-date manner.

The book encompasses: the chemistry of non-enzymic browning; recent advances; colour formation in non-enzymic browning; flavour and off-flavour formation in non-enzymic browning; toxicological aspects; nutritional aspects; other physiological aspects; other consequences of technological significance; implications for other fields; non-enzymic browning due mainly to ascorbic acid; caramelisation; inhibition of non-enzymic browning in foods; and inhibition of the Maillard reaction in vivo.

The book can be ordered on-line from the Royal Society of Chemistry for £84.95. Orders can be placed on the RSC web-site at: <http://www.rsc.org/Publishing/Books/0854049649.asp>

3 May 2005: Flavourists course opens with students from across the world



For the third year, the School of Food Biosciences is hosting a training course for flavourists. This year there are delegates from Argentina, USA, South Africa and Mexico as well as the UK.

The three week programme involves lectures, extensive practical sessions and seminars given by highly experienced flavourists from industry and university specialists in flavour chemistry. The course is organised in conjunction with the British Society of Flavourists. Several external consultants are contributing to the programme as well as members of the School's Flavour Chemistry Research Group led by **Professor Don Mottram**.

The course is providing an introduction to many key aspects of flavours. These include:

- Raw materials,
- Flavour Chemistry and Biochemistry
- Solvents, delivery systems, encapsulation and flavour release
- Flavour legislation
- Spray drying of flavours
- Practical creation of flavourings

The photograph shows two of the delegates in an initial laboratory session. More details of the course can be seen on our Flavourists Training Course page

27 April 2005: Second Annual School Research Day highlights the School's research strengths

All research students and staff, as well as colleagues from industry, attended this highly successful annual event.

The presentations given illustrated the breadth of research undertaken in the School. The talks ranged from Factors affecting Lipid Metabolism to Effects of Pre- and Probiotics on Gut Microflora and from Toxic Components of Food to Bioprocessing.

The prize for the best student presentation (£250 cheque and certificate) went to **Alix Dubert-Ferrandon** (a PhD student working with **Dr Alistair Grandison** and **Dr K Niranjana** from the Food and Bioprocessing Sciences Group), for her presentation entitled 'Real Time Gelation of Acid Milk Gels Using Confocal Microscopy'.

Following the Day, **Professor Christine Williams**, Head of School, stated: "I would like to formally express my appreciation of the excellent presentations given at the research day by many of our PhD students and post doctoral staff. Thank you for your efforts in communicating your science in such an effective way. The day was most interesting and I noted many opportunities for collaborative effort amongst us all."

For more details, go to our Research Day 2005 web page at: <http://www.food.rdg.ac.uk/sfb-research/researchday-2005.htm>.

18 April 2005: Appointment of Lecturer in Public Health Nutrition

The School is delighted to announce the appointment of **Dr Orla Kennedy** to the new post of Lecturer in Public Health Nutrition with effect from 1st July 2005.

Dr Kennedy comes to us from the University of Westminster where she has been a Lecturer in Human Nutrition with responsibility for their BSc Nutrition and Exercise Science. Her teaching has included public health nutrition, clinical nutrition and introductory nutrition modules. Prior to joining the University of Westminster, Dr Kennedy held various posts with the University of Ulster involving many aspects of nutrition, diet and health

Dr Kennedy will take responsibility for the organisation and curriculum development of the new undergraduate degree course in Nutrition and Food Science as well as teaching modules in Public Health Nutrition. The appointment will enhance the School's contribution to the newly established university thematic research area of 'Food Chain and Health'.

12 April 2005: Student and staff working hard in Australia

Rosie Archer, one of our Food Science with Business undergraduate students, is currently on an industrial placement in Australia. The six-month placement is with the Parmalat dairy at their main site in Brisbane.

Parmalat Australia Ltd specialises in the production of branded milk and dairy products and is one of the major manufacturers of milk, yoghurt and fresh dairy products in Australia. Rosie's work includes:

- development of bench scale samples during the development of new products

- assisting in the running of pilot plant trials in the scale up process for new products
- development of sensory analysis programme for new products
- monitoring of products for shelf-life analysis

Dr Mike Lewis is currently visiting the University of Queensland, undertaking collaborative research related to heat stability of milk with Associate Professor Hilton Deeth. He is being supported by a travel scholarship from the University of Queensland (UQ) and funds from the Dairy Industry Centre for UHT Processing, also situated in UQ. Mike has given presentations at dairies in Brisbane, Perth, Melbourne and Sydney and to the dairy research community in Werribee (Victoria). He has also visited Rosie Archer in Brisbane.

8 April 2005: Visit to China as part of link with Henan University



The School of Food Biosciences has a strong link with Henan University of Technology in China. The link is designed to help Chinese students at Henan to transfer onto programmes in the School of Food Biosciences.

As part of the growing links between the two Universities, **Dr K Niranjana** (a Senior Lecturer in the School) and **Dr Wei Li** (a Post-Doctoral Researcher in the School) have just completed two weeks at Henan. During their visit they held detailed discussions with the staff, with students and with some parents. In addition, Dr Niranjana provided a few lectures on current food issues.

The School is looking forward to welcoming students from Henan onto its programmes in the future. Students may come to Reading after two years at Henan to join the second year of our BSc programmes. Alternatively, students who complete four years of undergraduate studies at Henan will be able to join one of our MSc programmes.

The photograph shows Dr Wei Li and Dr Niranjana outside the impressive entrance to the new Henan university campus. For further details of our links with Henan, see our Henan University of Technology page at: <http://www.food.rdg.ac.uk/international/china.htm>

6 April 2005: 'The Science of Baking' Training Course attracts 18 from across Europe

A three-day training course entitled 'The Science of Baking' has started today here in the School of Food Biosciences. It is being jointly organised by the School of Food Biosciences and the 'American Association of Cereal Chemists' and 'Cereals & Europe'.

The course has attracted 18 delegates from across Europe - including The Netherlands, Belgium, Turkey, Spain, Italy and Ireland. Most have come from multinational baking and ingredients companies although some are from universities.

This course is helping to develop and extend the technical abilities of people working in the food industry and food research centers. The course will provide an in-depth understanding of the Science of Baking and present leading-edge, state-of-the-art knowledge and practice in Baking Science by the leading academic and industrial experts in the field. It will underline these efforts with applied case studies presented by industrial speakers and with practical sessions.

Lecturers on the course include Professor Peter Shewry (Rothamsted Research, United Kingdom), Dr. Sam Millar (CCFRA, United Kingdom), Professor Dr Klaus Lösche (Bremerhaven Institute for Food Technology and Bioprocessing, Germany), Dr. Martin Whitworth (CCFRA, United Kingdom), Dr. Frank Rittig (Novozymes Switzerland AG, Switzerland) and **Dr. Bogdan Dobraszczyk** (University of Reading, United Kingdom)

It is hoped to run the course again next year.

Our Degree Programmes

The **School 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>