



## 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>

### 23 March 2005: Congratulations to Dr Minihane on promotion to Reader!

The University has announced the results of this year's academic promotions and we are delighted to congratulate Dr Anne Marie Minihane on her promotion to Reader in Integrative Nutrition.

The title, 'Integrative Nutrition', reflects the broad nature of Anne-Marie's research work. This work uses a multi-disciplinary approach within nutrition. For example, one aspect of her research uses human and cell culture models to focus on many different nutrients and how they interact/integrate with each other. Her 3 main areas of research are:

- investigating the impact of fish oils fatty acids on coronary heart disease risk factors in humans
- investigating the impact of genotype on disease risk and responsiveness to dietary change
- determining the metabolism and cellular action of vitamin E

Dr Minihane joined the School in 1996 as a Postdoctoral Research Fellow. She was appointed lecturer in February 2001 and currently holds 8 research grants to the value of about £1 million.

She has a key role in the development of the newly established European Network of Excellence in the area of nutritional genomics (NuGO). This EU funded virtual network (2004-2008, €17 million) involves 25 partners from 10 European Countries. Her recent international activities have included visits to Germany (for the German Society for Biochemistry and Molecular Biology) and to Wageningen in the Netherlands where she presented two papers to the NuGO International Conference.

The School is delighted that her contribution to the strength of nutrition within the University has been recognised with this deserved promotion.

### 21 March 2005: School probiotics research published by Food Standards Agency

Research to find out whether bacteria from probiotic products survive in people's digestive systems has been published today by the Food Standards Agency. The work was conducted in the School by Dr Gaby Rouzard under the supervision of Professor Glenn Gibson.

The study was designed to find out if and where these bacteria break down as they pass through the digestive system. The study did not look at whether probiotic products have an effect on health.

The findings suggest that not all strains of bacteria used in probiotic products survive through the entire digestive system, although several did do well. The research does not show if or where probiotics might have an effect

Laboratory models of the human gut were used to imitate the conditions of the stomach, upper intestine and lower intestine.

Probiotic bacteria found in 11 different probiotic products were tested. Products included dairy and fruit juice containing live bacteria and dry preparations in the form of tablets, capsules and powder. All bacteria used were grown and their numbers standardised before each experiment began.

The researchers used a model to simulate the effect adding probiotic bacteria would have on the total number of bacteria in a typical human digestive system. Overall, adding bacteria from probiotics did not change the total number of bacteria in the gut.

For further details and a copy of the research publication, visit the Press Release published by the Food Standards Agency at: <http://www.food.gov.uk/news/newsarchive/2005/mar/probiotics>

## 18 March 2005: New 'grads4food' web-site established for all our graduates



The School of Food Biosciences has just launched a new website, grads4food. The site has been developed jointly by "Food" graduates of Food Biosciences Reading and the former National College of Food Technology (NCFT) to promote joint activity targeting the recruitment of high calibre graduates for the food industry.

We have many graduates working throughout the industry and the aim of the site is to encourage them to support the School of Food Biosciences' efforts to increase the number of students who study food science and technology degree programmes. We are convinced that there is a lot of good-will amongst our graduate population and this is a way we can tap into it.

In return the graduates can make contact with each other through the sites Message Board. Amongst other things this could enable them to advertise reunions or seek advice and support on technical issues.

To access the site, go to: [www.grads4food.org.uk](http://www.grads4food.org.uk)

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## 11 March 2005: Professor Williams to give keynote address to the German Nutrition Society

Professor Christine Williams, Head of the School of Food Biosciences, has been invited to give the opening plenary lecture to the annual meeting of the German Nutrition Society. The meeting is being held in Kiel, Germany, on the 17th and 18th March.

Professor Williams' presentation will be entitled: 'Dietary Fat and the Metabolic Syndrome'. The three remaining plenary lectures will all be given by speakers from German universities.

On her return, Professor Williams will be addressing the BBSRC Applied Genomics LINK meeting in Cambridge 21st March. Her presentation on this occasion will be entitled 'Moving from population to individual nutrition: role of diet-genotype interactions'

More details of the German Nutrition Society (the DGE) can be found at:

[http://www.dge.de/Pages/navigation/english\\_version/index.htm](http://www.dge.de/Pages/navigation/english_version/index.htm) or, for German speakers, go direct to the Annual Meeting page at: <http://www.dge.de/wk42/index.html>

## 10 March 2005: WHO Africa commissions Food Law Guidelines for Africa

The World Health Organisation (WHO) has a commitment to help ensure a safe food supply throughout the world. It recognises that one component of this is the development of effective national food control systems and that this requires modern food law.

However, many countries in Africa have failed to keep their food laws updated. Although many of their officials recognise the need to prepare new laws, they lack the detailed knowledge necessary to complete the process. Some African countries have been working hard at this and have adopted new laws. Their legislation and experience is seen as providing countries in the region with useful guidance.

In order to share this knowledge and to build upon other international efforts, the WHO African office has commissioned Dr David Jukes, Senior Lecturer in Food Regulation in the School, to draft new Regional Guidelines on Food Law for the African Region. Dr Jukes will review current food laws in the countries of Africa and, in consultation with those countries that have recently enhanced their systems, will draft the Guidelines. These will be published by the WHO and made available to all countries in the Africa region.

For more information on WHO Africa, visit their web page at: <http://www.afro.who.int/>

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## 25 February 2005: Adulterated Chilli Powder: a brief overview

Dr K. Niranjana, a Senior Lecturer in the School of Food Biosciences, has provided this brief overview of some issues related to the present recall of food products in the UK:

Sudan-I (Chemical name: 1-(Phenylazo)-2-naphthol) belongs to the class of dyes which are used to impart red coloration to products such as oils, solvents, and even shoe and floor polish. In general, Sudan dyes (Sudan I, II, III and IV) are not appropriate as food additives for humans, and are not permitted in food. But Sudan-I has found its way into a number of food products sold in UK/EU and other parts of the world (e.g. New Zealand, South Africa) through the use of contaminated red chilli powder. This hit the headlines in UK last Friday. Since then, nearly 450 products have been withdrawn from the shelves, and up to 300 companies may have got caught up in the scare.

Chilli powder is made by grinding dried chillies. The chillies are normally harvested when they start going red on the plant. After cleaning, they are either sun dried or machine dried, and graded by size and colour. The chilli is then ground into powder and packaged. Although chilli powder is principally used to generate taste and flavour, its red colour also improves the appearance of formulated products. The intensity of red colour is therefore a key selling feature. It is alleged that chilli powder could be worth almost twice its value if the colour is improved. This has, on a number of occasions, driven unscrupulous manufacturers all over the world, to adulterate powder that was otherwise perfectly fit for human consumption. Although some sections of the market in UK prefer the whole intact chilli, most processors buy the ground variety without themselves routinely testing for trace contaminants. Instead, they rely on the traceability documentation provided by suppliers, and the thousand or so random sampling checks undertaken by the Food Standards Agency (FSA) and other local

authorities. It is therefore not surprising that a dye - which had never gained acceptance as a food additive in the first place and has been subject to special certification since 2003 - has found its way into the food chain, albeit through a sample reportedly imported before the legal ban came into force.

Fortunately, this adulteration is unlikely to pose a significant threat to human health, principally because it has only been detected in one batch used in UK and that too at very low levels (a few milligrams for every kilogram of powder). In tests undertaken in New Zealand, only one out of 43 chilli powder samples showed the dye in measurable levels. In formulated products such as Worcester sauce, the dye is further diluted and health risks are extremely low. There is some concern about the potential cancer causing ability of this dye. The International Agency for Research on Cancer (IARC) designates Sudan -I as a Group 3 substance (implying that the evidence of carcinogenicity is inadequate in humans, and inadequate or limited in experimental animals). Regardless, the FSA's advice not to consume products containing this dye is eminently sensible.

Of course, this food scare - raises a number of issues concerning the traceability of our food ingredients. The supply chain is far too long in a global commodity market; and the links, involving a maze of middlemen and complicated contracts, do not lend themselves to effective traceability. On this occasion, the source of contamination appears to have been traced to an exporter in Mumbai (India), who has had the licence to export revoked by the Indian Spice Board. But then, is this exporter the only one involved? Are there others? Are there other products which we routinely use that are vulnerable to similar contamination? Surely there are a number of products - turmeric, for instance, has yellow colour as its selling attribute. But the key question is whether the government and business are doing enough to check the quality of imported commodities, so that the chances of such cases occurring in future are kept to a minimum. And are they doing enough to restore consumer confidence which has been badly shaken? In the longer term, it is for all of us to consider whether it will be economically viable to support elaborate procedures to monitor traceability and enforce quality standards, which may become necessary to sustain a very long and complicated food chain.

For more details of the product recall, see the Food Standards Agency Website at: <http://www.food.gov.uk/>

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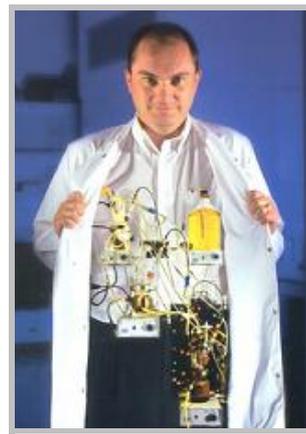
## 18 February 2005: School nutrition workers selected to attend prestigious EU leadership training event

Two members of the School, Dr Rafe Bundy (a Post-Doctoral Fellow) and Katerina Vafeiadou (a PhD student) have been selected to attend the prestigious European Nutrition Leadership Programme (ENLP) in Luxemburg next month.

The ENLP is a programme which aims to assist the development of future leaders in the field of human nutrition in Europe where during this 1-week course, held annually since 1994, emphasis is placed on understanding the qualities and skills of leadership, team building, communication and the role of nutrition and science in society.

For more details of the ENLP, visit their web-site at: <http://www.enlp.eu.com/>

## 2 February 2004: Gut microbiologists feature in BBC Radio science programmes



Professor Glenn Gibson and his team of microbiologists based in the School have played a prominent role in the current series of science programmes, 'Gut Reactions', featured on BBC Radio 4.

The group of microbiologists have an international reputation for their work on the microorganisms in the human gut and the health benefits of certain microorganisms.

The three programmes considered a series of issues relating to the gut. The final programme, recorded in the School's laboratories, focused in particular on the health benefits of consuming certain bacteria, often known as 'probiotics'.

Details of the programme are currently available on the BBC's web site at: <http://www.bbc.co.uk/radio4/science/gutreactions.shtml> from where the programmes can also be downloaded.

The photograph shows Professor Gibson demonstrating how key components of the alimentary tract can be modelled by laboratory equipment.

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## 31 January 2005: PhD students discuss flavours on BBC Radio programme

Guillaume Desclaux and Mei Yin Low were interviewed on Radio 4 "You and Yours" programme today, and discussed the nature of flavour and how it is perceived. Last May they attended the 3-week Flavourist Training Course organised annually by the School in conjunction with the British Society of Flavourists and in the interview they were also asked about the role of flavourists in developing flavours for use in the food industry.

Guillaume and Mei are PhD students working with Professor Don Mottram in the Flavour Research Group in the School where they are researching into the mechanisms of aroma formation in heated foods. Guillaume is French and his first degree was in Chemistry at the University of Toulouse. Mei is from Singapore and she has BSc and MSc degrees in Chemical Engineering.

The interview can be heard on the BBC Radio 4 web-site at <http://www.bbc.co.uk/radio4/youandyours/>

Details of the 2005 Flavourist Course being held 3 - 20 May 2005 are available on the School web pages at: <http://www.food.rdg.ac.uk/Shortcourses/Flavourist.htm>

## 28 January 2005: School participates in EU nutrition and genomics collaboration



On the 26-28th January Dr Anne Marie Minihane attended an integration meeting of the European Nutrigenomics Organisation (NuGO) in Munich.

The aim of NuGO is to integrate the expertise and technologies of the partners and establish a virtual 'Network of Excellence' in the area of nutrition and genomics by 2009. It is developing links between genomics, nutrition and health research. The School of Food Biosciences is one of 22 European Partners involved in this project. NuGO is one of a series of European Networks of Excellence being established as part of European Union's Framework Programme 6. A total of 17 million Euros has been allocated to this task.

For more details of NuGO visit their web-site at [www.nugo.org](http://www.nugo.org)

The photograph shows some of the dedicated researchers taking a break from their discussions. Dr Minihane is on the right of the photograph in the white T-shirt.

## 27 January 2005: Food safety and standards on agenda at Codex meeting in Rome



Dr David Jukes, Senior Lecturer in Food Regulation, was a delegate at the Codex Coordinating Committee for Africa which met in Rome this week. The Committee is part of the Codex Alimentarius Commission which develops international food standards to promote food safety and to enhance food trade.

The meeting, at the headquarters of the UN Food and Agriculture Organisation, considered many aspects of food standards and national food control systems and their application to Africa. It provided an opportunity for delegates from 29 African countries to share experiences and to contribute to the work of the Commission. Dr Jukes attended as the delegate for the European Food Law Association.

The picture shows Dr Jukes with Dr Patience Mensah, the WHO Regional Adviser for Food Hygiene who is based at the WHO Regional Office in the Republic of Congo. They jointly discussed possible future collaboration on food law issues for Africa.

## 24 January 2005: Further KTP award links School with innovative refreshment product company

Drs Alistair Grandison and Mike Lewis have been awarded a Knowledge Transfer Partnership (KTP) grant in association with Taste Trends Limited. The company manufacture machine vended frozen yoghurt and fruit smoothies under the brand name "Coolicious". They have a need to implement more rigorous quality control procedures, and wish to expand their product range and improve the nutritional attributes of existing products.

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. The duration of the award is 27 months and recruitment of an Associate will commence shortly.

The company, based in South London, was founded in 1994. More details of Taste Trends can be found on their web site at: <http://www.tastetrends.co.uk/index.htm>

## 5 January 2005: 51st Ice Cream Course opens

The School of Food Biosciences today welcomes 16 delegates to the 51st Ice Cream course. Organised on this occasion by Food Knowledge and Know-how (FKK), the 3 day course covers all aspects of the manufacture of ice cream. The scientific basis of ice cream is covered in formal lectures and the delegates get several opportunities to manufacture different types of ice cream using the School's pilot plant facilities.

The 16 delegates come from a wide spectrum of companies including several from family owned small ice cream businesses, dairy farmers, food ingredient suppliers and the large multinational companies.

Lectures and practicals are provided by staff of the School who have established a reputation for their work in aspects of dairy science and technology - and ice cream in particular.

## 2 January 2005: New KTP Associate joins School in link with dairy company

Yasmine Hernandez has just been appointed an "Associate" on a KTP scheme between Blackmore Vale Cream Ltd and the School of Food Biosciences. She will be jointly supervised by Dr Alistair Grandison and Dr Mike Lewis.

The scheme lasts for 2 years and Yasmine will be working on dairy product manufacture using membrane technology. Although 'employed' by the School and using the School's pilot plant facilities, Yasmine will be based at the company's factory in Shaftesbury, Dorset.

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.