

Tragic Death of Emeritus Professor Leo Pyle



We regret to announce the sudden death, in early April, of Leo Pyle, Emeritus Professor of Biotechnology and former Head of Department of Food Biosciences.

Professor Pyle and his wife retired to Ambleside in the Lake District five years ago where he was able to enjoy one of his great passions – the Lakeland Fells. It was in those fells that Leo appears to have fallen to his death whilst out walking last week.

His infectious enthusiasm for science and the new perspective he developed on almost any issue were the hallmark of a first class scientist. He had continued to regularly visit the Department to help us with our work. His support will be greatly missed by many.

Leo Pyle was born in Salford, Greater Manchester, the son of a railway signalman...During his early childhood, he demonstrated an aptitude for science which saw him sit his exams before his peers and led him on to Salford's De La Salle college and then Manchester University, where he studied chemical engineering.

His first job was as a researcher with the National Coal Board, however he returned to academia taking up a post as lecturer at Imperial College London where he was to remain for the next 20 years. During that time Prof Pyle took advantage of the sabbaticals offered to members of the academic profession and he travelled the world with his wife Dympna, whom he met while they were both students.

In the 1970s the couple moved to Chile to enable Prof Pyle to take up a post with the country's state petrochemical industry. They were planning to settle in Chile, and their son Chris was born in the country, however, the political unrest forced them back to England.

Despite returning home, Prof Pyle continued to travel extensively in Asia and Africa and his fluency in Spanish meant his lecturing skills were particularly in demand in Latin American universities. He was appointed as a professor in biotechnology at the University of Reading in 1985, where he rose to become head of the department.

During this period, his profound Christian beliefs and desire to help the poor of Latin America saw him become heavily involved in a scheme which flew academics out of the political turmoil in their own countries to the safe haven of the UK.

Prof Pyle loved the Lake District, and many happy family holidays prompted a move to Clappersgate, near Ambleside, in 2003 following his semi-retirement. However, he continued in his roles as a Visiting Professor at Manchester University and Emeritus Professor at Reading.

He became deeply involved in various community groups including

spearheading the Ambleside Climate Change Forum and also served as chair of Churches Together in Ambleside. Prof Pyle was a keen mountaineer and walker and enjoyed spending time with his family.

He was found dead by mountain rescuers at Red Screes near the Kirkstone Pass in wintry conditions late on Tuesday, March 25. He is survived by his wife, four children and numerous grandchildren.

Death of dairy microbiologist, retired lecturer Dr Richard Robinson



It is with great sadness that we also report the death in late April of Dr Richard Robinson, who retired from the Department of Food Biosciences in September 2003.

Richard's academic career started in Oxford as a mycologist. On moving to the Department of Food Science at Reading in October 1971 his interests rapidly broadened and he developed an interest in dairy science, fermented milks in particular.

It was not long before he began to share his knowledge by writing and editing a large range of books,

particularly on dairy microbiology and dairy technology. He was also an editor of the Encyclopaedia of Food Science, Food Technology and Nutrition, which provided a comprehensive reference book for undergraduate food science courses.

In addition to his research, teaching and writing he contributed to the activities of the Society of Dairy Technology taking on the Scientific Editorship of the International

Journal of Dairy Technology, from 1998 to 2003.

His research into fermented milks and similar products brought in research students from a wide range of countries, particularly from the eastern Mediterranean and the Middle East. It was only recently that he was in the Gulf to attend the wedding of one of his former students. His international reputation was also recognised in

2002 with the award of a DSc by the University of Stellenbosch, South Africa. He retired from the University in September 2003.

Richard will be greatly missed, not only by his two daughters but also by his many friends worldwide.

News

The following news items illustrate some of our activities during the last 4 months. To keep up to date with our activities, please take a look at our news pages at:

<http://www.reading.ac.uk/foodbiosciences/about/foodbio-news.asp>

28 April 2008: Promotions announced for Drs Richard Frazier and Jeremy Spencer

The annual round of promotions at the University is always competitive so it is a great pleasure that this year two of our staff have been promoted. It has been announced today that Dr Richard Frazier has been promoted to Senior Lecturer in Food Biochemistry and Dr Jeremy Spencer has been promoted to Reader in Molecular Nutrition. Congratulations to them both.



Dr Richard Frazier was appointed to a lectureship in the Department in October 2000. His research has

since focused on aspects of food biochemistry – in particular to further our understanding of the functional properties of cereal proteins. Since joining the Department he has published extensively in leading academic journals and has provided chapters to several books. He has successfully supervised several PhD students funded predominantly through collaborations with the food industry. He is an Associate Editor of Food Chemistry, one of the most highly ranked food journals.

As well as research, Richard has been active in both teaching and administration. Since joining the Department he has become a Fellow of the Higher Education Academy. In 2006 the University recognised his contributions to teaching developments within the Department by giving him an Award for Outstanding Contributions to Teaching and Learning. As our Undergraduate Admissions Tutor, he has performed a key role in our successful recruitment activities, including the introduction of our BSc Nutrition and Food Science programme.



Dr Jeremy Spencer joined the Department in May 2004 and rapidly established a strong research group. His group is one of the few in the world dedicated to working mechanistically at the interface of dietary phytochemicals and brain function. His success in both obtaining research funding and in achieving results is impressive. His total funding is now nearing three million pounds, mostly from research councils (notably the BBSRC) but also from industrial contracts. His work is a key part of one of the University's research themes, Food Chain and Health, and

he leads the sub-theme on Plant Bioactives and Health.

He has already published over 75 peer-reviewed papers and, as a sign of international recognition, has been invited to write several peer-reviewed review articles. His reputation has already led him to be an invited speaker at 17 international conferences.

Jeremy is also committed to his teaching having recently achieved the status of Fellow of the Higher Education Academy. He is convenor for two taught modules and is a member of the course team for our popular BSc Nutrition and Food Science.

24 April 2008: Professor Niranjan in Chile for International Congress on Engineering and Food

Professor Niranjan has this week been attending the 10th International Congress on Engineering and Food held from 20th – 24th April in Viña del Mar, Chile. Also present at the Congress was a PhD student from the Department, Carlos Jimenez Junca.

Professor Niranjan was very active during the Congress. At the session on 'Issues in food process engineering' he presented a paper entitled "The dynamics of food business and challenges facing food engineers". He had also been asked to chair the session on 'Gastronomy and engineering'.

On a sadder note, Professor Niranjan lead a special tribute to Professor Leo Pyle whose death we reported recently. Leo had spent some time in the early part of his career in Chile and had many friends in South America. As an engineer working with food, Leo had actively contributed to many of the previous Congresses.

21 April 2008: Project to develop confectionary with natural colours links Department with specialist food business



The Department has been awarded another grant to link it with a food company. Under the Knowledge Transfer Partnership (KTP) scheme, young graduates are employed to help develop new business opportunities using the combined skills of the business and the university.

This new award links the Department with the Gourmet Candy Company (GCC) in north London. The company imports specialist confectionary items (examples include chocolate, candy and mallow sweets) for sale under either one of their own brands or an own-label brand of a retailer. The company has been aware that there is increasing resistance to 'artificial' colours and wants to incorporate more natural alternatives in its product ranges. The new project, which lasts for two years, should help them achieve this.

Under the scheme, one of our own recent graduates has been selected to be the KTP Associate. **Devina Gohil**, who starts work today, graduated last year from our BSc Food Science programme. Having already gained some relevant industry experience in a large food company, she is now looking forward to new challenges. Her manager at GCC is also one of our graduates. **James Woolfe** graduated with a BSc in Food Manufacture, Management and Marketing in 2002 and was himself a KTP Associate for 2 years after graduating. The

academic partner from the Department is **Dr David Jukes** who will be helping ensure that the new products meet the required technical and legislative standards.

Several of our staff have been involved in a wide range of KTP projects. Supported by funding from government, the KTP scheme provides academic staff with an opportunity to use their skills in an industrial setting and allows the industry to benefit from the advanced knowledge of academia. The University of Reading is one of the most successful institutions in attracting KTP funding.

16 April 2008: American Chemical Society recognises achievements of Professor Don Mottram

Each year the American Chemical Society (ACS) makes awards to key scientists who have made significant contributions to the understanding of chemistry.

This year, their Division of Agricultural and Food Chemistry has awarded their 'Advancement of Application of Agricultural and Food Chemistry Award' to **Professor Don Mottram** of this Department.

To be considered for the Award, a nominee must have made (1) outstanding application of chemistry and/or chemical technology to the solution of agricultural or food problems of importance to the nourishment and health of mankind, or (2) outstanding contributions to the advancement of pure and/or applied agricultural and food chemistry. Special consideration shall be given to independence of thought and the originality shown, or to the importance of the work when applied to the public welfare or the needs of humanity.

In this case, the ACS award recognises Don Mottram's contribution to flavour science over the past 30 years. In particular, it acknowledges his major contribution to the understanding of

the chemistry of the Maillard reaction, which is responsible for flavours formed during the heating of foods. His work has helped to explain the role of the different food components in the generation and retention of flavour in many types of cooked foods. In this context his research on meat flavour has received particular recognition.

In 2002 when acrylamide, a probable genotoxic carcinogen, was reported in fried and baked potatoes and cereal products, Don Mottram was the first to show that the Maillard reaction between the amino acid asparagine and sugars, both naturally occurring components of foods, was responsible for this acrylamide. This discovery was the major breakthrough in what has become one of the most important issues in food chemistry in recent years.

It is unusual for the award to be made to a scientist from outside the US so it represents an outstanding achievement for Professor Mottram. He will be presented with the award at the forthcoming ACS Annual Meeting to be held in ACS Meeting in Philadelphia in August.

His contribution to flavour science was also recognised 5 years ago by the Royal Society of Chemistry with the award of the 2003 RSC Medal for Food Chemistry.

14 April 2008: International students rank the University as top for learning experience

The University of Reading has been ranked No 1 for its Learning Experience by our international students in an external International Students Barometer Survey, which is run by an external consultancy company I-Graduate.

The survey is the biggest of its kind worldwide and this year there were 91 institutions who took part and 84 of them were benchmarked. The benchmarked institutions included Oxford, Cambridge, Yale and nearly

all of the 'Russell Group' (a grouping of the top UK research-based universities) and 14 of the '1994 Group' (a group of UK universities which have similar characteristics to Reading).

This is an excellent achievement. The Department of Food Biosciences, with its high number of international students, is proud to have contributed to the survey results.

The survey looked at the students Learning, Living and Support Experiences. More details of the results are given below.

Learning

Of the 18 elements used to measure the learning experience, 'lecturers who are good teachers', 'academic course content', 'subject area expertise of lecturers', 'fair and transparent assessment' and the 'technology provision (networking, PCs, etc)' were considered to be most important to respondents at the University of Reading.

Of these most important areas, ranking positions were as follows:

- Good teachers – 1st in the benchmark (95% satisfied).
- Course content – 1st in the benchmark (97% satisfied).
- Expert lecturers – 2nd in the ISB, 1st in the 94Gi (99% satisfied).
- Assessment – 5th in the ISB, 2nd in the 94Gi (89% satisfied).
- Technology – 7th in the ISB, 1st in the 94Gi (92% satisfied).

All of these areas were proven to be statistically significant by i-graduate.

The overall satisfaction with learning placed Reading 1st of 84 UK and overseas higher education institutions with an average satisfaction of 88% in the learning experience.

Living

20 elements were used to measure the living experience at Reading. Of these 'internet access', 'feeling safe and secure', 'cost of accommodation',

'cost of living' and 'transport links to other places' were considered to be most important.

Rankings for the most important elements were as follows:

- Internet access – 32nd in the ISB, 3rd in the 94Gi (86% satisfied).
- Safety – 29th in the ISB, 8th in the 94Gi (94% satisfied).
- Accommodation cost – 51st in the ISB, 6th in the 94Gi (53% satisfied).
- Living cost – 32nd in the ISB, 3rd in the 94Gi (86% satisfied).
- Transport links – 48th in the ISB, 4th in the 94Gi (79% satisfied)

It should also be noted that accommodation cost, living cost and transport links are all in the lower median of the ISB but are of high importance to respondents at Reading.

The overall satisfaction with the living experience placed Reading 40th in the ISB and 6th in the 94Gi with an average satisfaction of 76%. Year on year, the average satisfaction with the living experience has gone from 73% average satisfaction in Autumn 2006 to 76% average satisfaction in Autumn 2007.

Support Services

13 elements within support services were ranked in the ISB for Reading.

The most commonly used elements were 'campus eating places', 'Students' Union', the 'Accommodation Office', 'IT and system support' and the 'Finance Office'. Of these elements, the ranking positions were as follows:

- Catering – 28th in the ISB, 3rd in the 94Gi (79% satisfied).
- Students' Union – 7th in the ISB, 1st in the 94Gi (92% satisfied).
- Accommodation Office – 3rd in the ISB, 1st in the 94Gi (85% satisfied).
- IT Support – 11th in the ISB, 2nd in the 94Gi (91% satisfied).

- Finance Office – 24th in the ISB, 4th in the 94Gi (84% satisfied).

Overall satisfaction with support services as ranked placed Reading 12th in the ISB and 2nd in the 94Gi with average satisfaction at 86%.

4 April 2008: Department helps Nottinghamshire school students gain notable award



A group of 6th formers from Nottingham Girls High School have spent 2 days in the Department learning about advanced analytical techniques.

The group are seeking to gain a Gold Crest Award. The CREST (CREativity in Science and Technology) is a UK-wide Science, Technology, Engineering and Maths (STEM) award scheme managed by the BA (British Association for the Advancement of Science). Through CREST, young people aged 11-19 explore the real nature of STEM by doing their own creative problem solving through mini projects.

The Nottinghamshire girls have been helped in their task by **Professor Glen Gibson** and two of our researchers, **Theo Goulas** and **Sakis Goulas**, who have been teaching them an enzyme assay and how to do PCR (polymerase chain reaction) study on lactic acid bacteria.

13 March 2008: Final year food students show off their product development skills



Our final year food students (from all our food-based programmes) follow a module on food product development during their final teaching term.

The module starts with a short set of introductory lectures given by **Professor Basil Jarvis** who uses his wealth of experience from many years in the food industry. The students are then put into small groups and set their challenge. Each group is given a key criteria and asked to develop a novel food product which meets these.

Today the groups presented their results to the other students, to staff and a number of assessors. The assessors included Sue Camm and Jenny Saich from Kerry Foods (who provide the prize for the best product), Professor Jarvis and **Dr Alan Bell** from the Department.

Jane Goodwin, Fanny Ma, Alicia Stanley, Ruth Townsend and Jun Wen Xiao after being given a specific product brief “for a packaged, shelf stable, highly nutritious, high carbohydrate (polysaccharide) product suitable for use as the principle component of the lunch box for young (i.e. pre-teenage) children”, produced an imaginative “lunch box” product to become this year’s group winners. Their product, “Fun filled miniloaves”, won the group the Kerry Product Development Prize.

The Shield and individual cheques (£100) will be presented by Sue Camm to the students on Graduation Day.

7 February 2008: Professor Rowland in Germany to address Life Stage Nutrition conference

Professor Ian Rowland, Head of Human Nutrition in the Department has today, been addressing the Life Stage Nutrition conference in Frankfurt, Germany.

Under the title ‘Diet and Cancer Prevention’, Professor Rowland considered the likely rise in cancer rates in the coming decades. The presentation addressed the following questions: What are the main causes of cancer? What evidence is there that we can alter cancer risk by modifying diet? And, what specific dietary changes are most effective?

Professor Rowland is on the editorial boards of 5 journals and is the author of over 200 scientific publications. His current research areas include the role of diet (in particular probiotics, prebiotics, phytoestrogens, and phytochemicals) in prevention of colon, breast and prostate cancer.

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

3 February 2008: Country of origin labelling rules explained on BBC television

The rules on food labelling are complex. There is increasing pressure for more information on where our foods come from. The European Union is considering the matter and is likely to propose some changes.

In advance of this, the BBC Countryfile programme has today looked into the current rules. To help them, they invited **Dr David Jukes**, Senior lecturer in Food Regulation in the Department, to discuss how the rules work..

The programme considered how the labelling rules would be applied to a fictitious ready meal using imported

meat but manufactured in the UK. By emphasising that the product was manufactured in the UK, it is possible to hide the origin of the meat. However, although this may be seen as a problem by some consumers, it can be difficult to devise rules which are useful without excessive additional burdens and costs.

Whilst many consumers might be interested in the origin of the meat, do they need this information? And what about the origin of the other ingredients – rice, tomatoes and spices for example? Should these declare their origin? A key issue, explained by Dr Jukes, was that any information that is provided on the label must not mislead the consumer. Manufacturers often chose to give additional details but the legislation requires that this is accurate and truthful.

23 January 2008: Food Society Chinese New Year Party

The Food Society held a Chinese New Year Party this evening attended by students and staff from the department. This event was organised by Hazel Tang, a final year

Food Science student, and her fellow students who joined our department from Henan University in China.

Eight traditional dinner courses were served and we were able to learn about the traditions surrounding Chinese New Year and take part in a chopstick competition. After dinner there was an opportunity for students and staff to show off their singing talent as a Karaoke was held.



The Food Society is run by undergraduate students in the department and organises social events and visits to industry, trade shows and exhibitions. The society is currently led by a committee of four second year BSc Food Science students (**Sam Hyde, Jim Goodson, Scott Burrell, Nicky Martin**) and one final year student (**Hazel Tang**) who were responsible for tonight's event and for raising sponsorship

from Rowse Honey and Dairygold Food Ingredients.

The Department welcomes a large number of international students each year. We have established links with a number of Chinese universities with Henan University sending a significant group of students each year.

20 January 2008: International experience for PhD student

One of our second-year PhD students, Duangkamol Charoenwong, 'Kook' to her friends, has recently spent ten weeks working in the laboratory of Professor Rudi Vogel at the Technical University of Munich.

Kook was awarded a grant for a Short Term Scientific mission under the EU COST programme. Her project is concerned with understanding the mechanism by which E. coli cells are killed by high hydrostatic pressure. High Pressure is being used increasingly as a non-thermal method of food preservation that kills microbes without causing undesirable organoleptic changes to the food.

During her stay Kook used proteomic techniques to identify the cellular origin of proteins that are released from pressure-treated cells.

Kook's PhD studies are supported by a scholarship from the Royal Thai Government and she is supervised by **Dr Bernard Mackey**.

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
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- 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.reading.ac.uk/foodbiosciences/>