

# Probioticbulletin

An update for healthcare professionals

## New healthcare professional website

The Yakult healthcare professional website has had a make-over. We are proud to relaunch the website and would like to take this opportunity to tell you about the different sections and how it can help you.



We've rewritten and redesigned the website, so that everything you want to know about Yakult and probiotics is at your fingertips. Divided into four sections, the new website makes it easy for you to find out the latest research, download booklets and articles, get in contact with the team, and not least, download the latest issue of the Probiotic Bulletin.

The new website will help healthcare professionals increase their knowledge about probiotics and gain an understanding about their potential benefit in primary and secondary care settings.

Because the website will be updated regularly with new research it will be a key resource for anyone wanting to find out about the latest evidence for probiotics.

## The four sections

### 1. Yakult

This section of the website is where you can find out everything about Yakult - the product and the company, including a comprehensive frequently asked questions (FAQ) section and a page detailing nutritional and other information about Yakult and Yakult Light.

### 2. Probiotics in healthcare

If you work in a healthcare setting, this section is for you. You can download a booklet, detailing probiotic evidence for a range of healthcare areas, such as irritable bowel syndrome, diarrhoea and *H. pylori*. It is intended to be a 'dip-in, dip-out' information source which reviews the strength of evidence for each area. These sections are written in bite-size chunks, giving enough to help you make evidence-based decisions.

[www.yakult.ie/hcp](http://www.yakult.ie/hcp)

## Why register?

- Download copies of our booklets
- View current and past issues of the **Probiotic Bulletin**
- Access the latest evidence and references for the benefits of probiotics with links to PubMed abstracts
- Read some probiotic articles written for healthcare publications
- Find out how to order Yakult for your hospital
- Read our comprehensive list of useful organisations for healthcare professionals

## 3. Resource centre

Discover all the different ways that Yakult can help you. Here you can download copies of all our booklets, or request a free postal copy. There is also a comprehensive probiotic reference list, with links to PubMed abstracts, making it easier and quicker for you to access the information you need. Find out about the educational talks we can give and ways we can support your continuing professional development. You can also sign up for this newsletter and access the archive of all our past issues.

## 4. Contact the team

If you're interested in what we do, and who we are, this will tell you everything you need to know. Find out our credentials and who to contact to best answer your enquiry. There are also photos of us!

## Did you know?

Three interesting facts that you might not know!

1. **Did you know your gut bacteria weigh approximately 1.5kg?**
2. **Over 60 clinical trials\* have been published on probiotics in 2008 so far**
3. **The world 'Yakult' is derived from the word 'Jahurto', which is Esperanto for yoghurt.**

\* using search term 'probiotics' on pubmed and filtered for 'clinical trials' and published in 2008. (66 in total)

## International Congress of Dietetics (ICD)

In September, Miki Toyota escorted Catherine Collins RD and Dr Michael Millar and his wife on a trip to the 15<sup>th</sup> International Congress of Dietetics in Japan. Here, they each share their experiences of the trip.

### Experiences at the 15<sup>th</sup> International Congress of Dietetics

By Dr Michael Millar, Barts and the London

I was fortunate to be invited to give a talk (*Probiotics in Preterm Infants*) at the 15<sup>th</sup> International Congress of Dietetics held in Yokohama, Japan, September 8<sup>th</sup> – 11<sup>th</sup> 2008. The conference was held in an impressive and modern conference centre located on the shoreline and harbour of Yokohama, close to the Landmark Tower (the tallest building in Japan). There were over 3,000 delegates at the conference. A major focus of the event was on the relationship between health and diet, and the presentations covered a wide range of dimensions including biological mechanisms, culture, politics and ethics. The accompanying exhibition included an array of commercial stands illustrating the increasing investment in the development and marketing of functional foods. My own presentation was in English but the conference



was well organised to allow for participation by peoples with a wide range of languages so there were simultaneous translations taking place through all of the major presentations. The meeting was very well organised and included evening entertainment. A particular highlight was an evening concert by the Japan Philharmonic Orchestra (sponsored by Yakult Honsha) held at the end of the first full day of the conference. A banquet and entertainment was also laid on for delegates on the evening of the second full day of the conference.

Overall this was an excellent meeting held in a great venue, well organised and focussed on issues of great and immediate interest for anyone with an interest in the relationship between nutrition and human health.

## Visit to Yakult Central Institute for Microbiological Research (YCIMR)

By Miki Toyota, science officer

The sky was clear blue on the day we visited YCIMR and it was hot (approximately 30°C) and humid, typical of a Japanese summer day. In Kunitachi City, Tokyo, there is a huge rice field, and as we approached the middle of the field, the YCIMR building suddenly came in to view.

Established 1967, the institute researches the use of intestinal bacteria as a factor in health maintenance and conducts a wide range of studies on the benefits of microorganisms.

YCIMR is divided into five sections consisting of:

- ♦ basic research
- ♦ food material development
- ♦ pharmaceutical development
- ♦ cosmetic development
- ♦ analysis centre

I visited the institute with our Yakult guests from the UK; Dr Michael Millar, his wife Monica and Catherine Collins (St George's Hospital). We were welcomed by the staff at the research institute and shown round. In particular we were shown the Intestinal Flora Analysis System, YIF-SCAN. This machine has been invented by YCIMR and it allows quick, simple and accurate analysis without cultivating the intestinal flora. Our guests were very interested and asked many questions. This was followed by a tour of the institute and Dr Millar gave a lecture about '*Probiotics for Preterm Infants*' to the Japanese scientists. They were very enthusiastic and discussion time ran out quickly because there was so much interest.

After visiting YCIMR, I felt it was an excellent opportunity to see the centre of the '*brain*' for Yakult. More than 250 Japanese scientists work at the institute to support Yakult all over the world.



L-R Miki Toyota, Catherine Collins, Mrs Millar, Dr Millar, Dr Tanaka, Dr Sako, Dr Morotomi, Dr Sawada, Dr Chonan and Mr Kimura

## ICD conference report

By Catherine Collins RD  
Principal Dietitian, St George's  
Healthcare NHS Trust

"Everyone has expertise on food related concerns that simply must be out" stated Professor Cecilia Florencio, speaking to the 3000-plus delegates of nutrition and related disciplines attending the 15<sup>th</sup> ICD meeting in Yokohama, Japan – elegantly highlighting how, despite the best intentions of nutrition professionals, both media and public interpretation of dietary research has led to the decline in 'competent eaters' - individuals comfortable yet flexible with what they choose to eat and able to view food as both nourishing and enjoyable. In contrast, she presented the 'Nouvelle Nutrition' approach, whereby obsession about the health benefits of food – "Potassium: the reason to eat a banana!" perpetuated and heightened anxiety about food and health in a food-fixated western culture.

Such comments echoed the ICD theme of "Global Dietetic Linkage and Co-operation for Human Health", an unwieldy title but one permitting speakers to share their research and practice and highlight global differences and similarities, whilst celebrating the unique skills of the dietitian. In the words of Dr Johanna Dwyer, dietetics is a profession "uniting food, culture and science to improve human health and quality of life".

### Nutrition themes

The key nutrition themes to a healthy life via healthy diet - from infancy to centenarians - proved remarkably consistent, even though culturally acceptable guidelines were so visually different. From Japan's 'Spinning Top', the 'Pagoda' (China), 'Nutrition flag' (Thailand), 'Pyramid model' (USA), to the UK's 'Eatwell plate'. An emerging theme of population studies, stated Dr Kraissid Tontisirin, former Director of the FAO, was the recognised 'double burden of malnutrition' in developed and developing populations – from undernutrition in infants and the disenfranchised poor, to overnutrition and obesity in those with adequate 'food security'.

It was inevitable that Japan, renowned for its fish and functional foods, included both within the educational programme. Dr Jorn Dyerberg presented his ground-breaking research on the Inuit population of Greenland, whose high fat diet belied an incredibly low rate of CVD mortality. His group's seminal work, published in The Lancet (1971) suggested the striking health benefits could not be attributed solely to lipid profile, eventually identifying marine omega-3 fats EPA and DHA as key agents in reducing CVD risk. His talk extended to emerging areas of EPA/DHA research, including cancer, inflammatory conditions, and aspects of mental health.



### Probiotic research

Mitsuhiro Ushio reviewed recent developments for food health claims in Japan, explicitly outlining how foods achieved FOSHU (Foods Of Specified Health Use) or 'Foods for Specialised Dietary Use' status. As of July 2008, 738 food products had been granted FOSHU status - 38% probiotics, prebiotics and synbiotics. The role of probiotics was further explored beyond the management of diarrhoea, IBD, pouchitis and reduced infective complications in ICU patients with SIRS. Dr Kitajima presented work on *B. breve* given to premature babies, demonstrating its rapid GI tract colonisation with significantly reduced gastric air aspirates and improved feed intake and growth. Dr Nomoto described the developments allowing faecal flora and organic acid production in full-term infants to be tracked by YIF-SCAN and HPLC techniques, demonstrating the dynamics of bacterial colonisation within the first few weeks of life. Drs Naito and Ishikawa presented work on the use of *L. casei* as secondary prevention for bladder and breast cancer recurrence respectively, and the potential biochemical mechanisms contributing to these effects.



Finally, Seoul University's Dr Sang Chul Park addressed the concepts of living long and living well with an engaging presentation on Korean centenarians. His conclusions? Longevity was not related to calorie restriction, but to dietary balance and diversity of food choice. Centenarians managed good glycaemic control and healthy cholesterol levels, the latter attributed to their very low fat (14% energy) diet. Yet their diets were by no means nutritionally adequate, with low dietary fibre intakes, low protein intakes in women, and several sub-optimal vitamin intakes, with half the women anaemic and few (17%) taking nutritional supplements. Fermented foods (kimchi) seemed to compensate for low nutrient intakes, in particular vitamin B<sub>12</sub> provision, resulting in 85% of centenarians having a normal B<sub>12</sub> status. Heartening was the fact that 63% were still physically active, and 83% considered their overall health 'good', or 'very good'.

A heartening lesson for us all, and another contributing presentation to this excellent conference that I was so fortunate to attend, and I would like to thank Yakult UK for the opportunity to do so.

## The importance of continuing professional development

By Deirdre Jordan Yakult Ireland

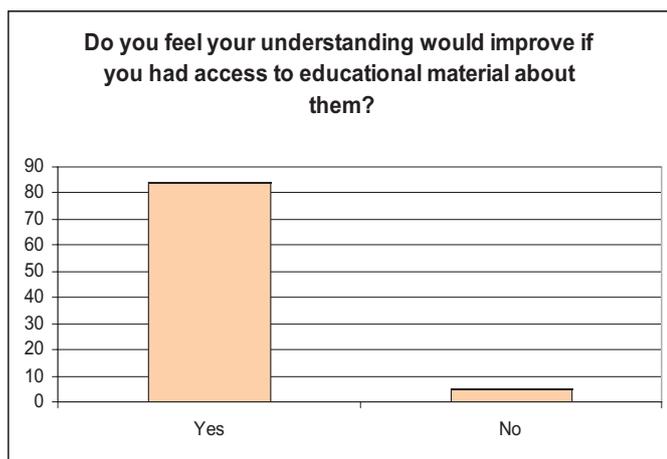
In July the science department in Yakult Ireland circulated a healthcare professional questionnaire to all dietitians in the Irish Nutrition and Dietetic Institute (INDI). All completed and returned questionnaires were then entered into a prize draw to win a place at the Yakult UK symposium which included flights to London and accommodation.

The aim of the questionnaire was to gain a better understanding of the support and resources that healthcare professionals need to continue their professional development.

In total there were almost 100 respondents to the questionnaire with 50% being Dublin-based dietitians and 50% from all around the country (West, Midlands, Cork, Limerick, Waterford, South East, Kerry and the North East).

The questionnaire was broken into four sections in order to zone in on current understanding and needs in these areas. The sections were probiotics, Yakult, continued professional development and location.

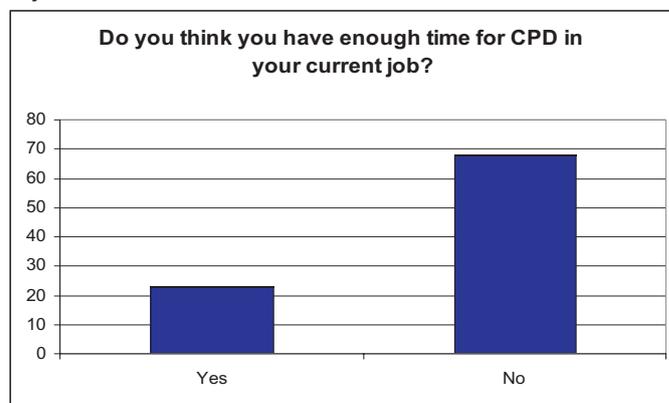
Largely all (90%) of the dietitians had taken a probiotic, and most advised patients to take them by naming a few at a time. When asked about their understanding of probiotics 60% believed they had an average understanding, while 38% felt they had a good understanding. Unsurprisingly 94% of the respondents believed that their knowledge of probiotics would improve if they had access to probiotic educational material!



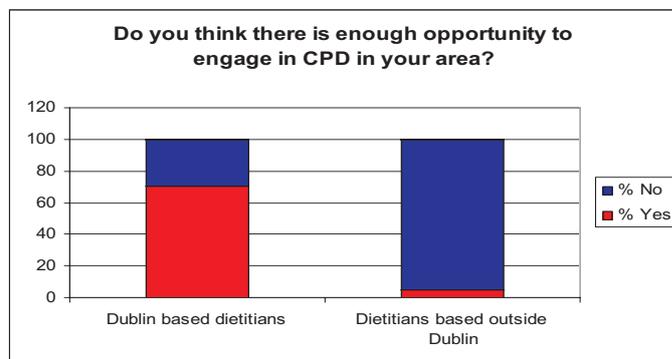
In terms of Yakult knowledge all but three of the respondents had heard of Yakult! But unfortunately most of these dietitians were unaware of the free resources that we provide, yet many who stated they were unaware of the free resources were already receiving the probiotic bulletin a very valuable resource! Many were also unaware that Yakult had a specific website just for healthcare professionals (log on now to the new updated website, don't hesitate to recommend

it, if you find it useful). If you are reading this article you may be one of the 33% of people who receive the bulletin already. The tools you identified as being most valuable to you as a healthcare professional were research summaries and fact sheets.

Continuing professional development (CPD) was considered vital to 86% of dietitians in their job role with 13% considering it to be important, but a whopping 75% stated they did not have enough time for CPD in their current role. On the whole dietitians were able to get time off work to attend educational sessions however this was dependant on the relevance of the event. Most dietitians (94%) were willing to attend educational events after work but only 38% were willing to attend these events at the weekend. On the whole neither the dietitians nor their employers were willing to pay for events outside of work hours. Educational seminars were deemed to be the most desirable form of CPD to include in the working day.



Location threw up some very interesting answers. It seems that dietitians based in Dublin are more aware of the resources that Yakult provides for HCPs. Location also affected respondents opportunity to attend additional learning sessions country-wide. However, when Dublin-based dietitians and dietitians based outside of Dublin were analysed separately the difference was astounding.



The results of this questionnaire highlight how important continued professional development is to just one set of healthcare professionals. It also shows how difficult it can be to keep up with CPD.

If you would like to keep up with probiotics and all the latest research log on to [www.yakult.ie/hcp](http://www.yakult.ie/hcp) and check out the new website.

## New research - modulation of the immune system

Recent research published in the British Journal of Nutrition by Ortiz-Andrellucchi *et al* (2008) has added to the evidence that probiotics are able to modulate the immune system.

In this study a fermented milk drink containing an *L.casei* strain was given to lactating mothers. This randomised, controlled and double-blinded study had a sample size of 104 women and investigated whether supplementation of a probiotic for six weeks from postnatal day 3 to day 45, could modulate the immune system in mothers.

The study looked at a range of immune markers to determine the profile of Th1/Th2 (t-helper cell, type 1 and type 2) this included interferon- $\gamma$  and IL-4. It also looked at the number of infectious and allergic episodes in the first six months of life in the offspring.

The results showed a non-significant increase in T and B lymphocytes, and a significant increase in natural killer (NK) cells ( $p=0.026$ ). Fewer gastrointestinal disturbances were reported in the babies whose mothers were taking the probiotic, and a decrease in TNF- $\alpha$  (a pro-inflammatory cytokine) was observed in the maternal milk of the mothers in the probiotic group.

For more information about the effects of probiotics on the immune system and NK cells we refer you to the following papers.

- ♦ Morimoto, K *et al* (2005) Modulation of natural killer cell activity in habitual smokers. *Preventative Medicine* **40**, 589-594.
- ♦ Ortiz-Andrellucchi, A *et al* (2008) Immunomodulatory effects of the intake of fermented milk with *Lactobacillus casei* DN114001 in lactating mothers and their children. *British Journal of Nutrition* **100**, 834-845.
- ♦ Shida, K, *et al* (2006) Essential roles of monocytes in stimulating human peripheral blood mononuclear cells with *Lactobacillus casei* to produce cytokines and augment natural killer cell activity. *Clinical & vaccine Immunology* **13**(9), 997-1003.
- ♦ Takeda, K and Okumura, K (2007) Effects of a fermented milk drink containing *Lactobacillus casei* strain Shirota on the human NK-cell activity. *The Journal of Nutrition Supplement* **137**, 791S-793S.

## Next Issue...

The next issue of the newsletter will feature a report on the Yakult UK Symposium written by nutritionist Fiona Hunter. It will also feature an interview with Professor Eamon Quigley from University College Cork, who is speaking at the 17<sup>th</sup> Symposium on Intestinal Flora about probiotics and IBS.

- ♦ Watch this space for new Yakult research  
**Coming to you soon**

## Contact Us

If you have any questions about probiotics please write, email or phone.

**Write:** Science Department  
Yakult Ireland  
Berkeley House  
21 Cookstown Industrial Estate  
Tallaght  
Dublin 24

**Email:** [science@yakult.ie](mailto:science@yakult.ie)  
**Phone:** 01-4599580



## How can we support you?

- Free probiotic literature
  - Probiotic Bulletin newsletter
  - Free supply of Yakult for limited trial period\*
  - Free educational talks by our team of nutritionists and dietitians
  - Advice on probiotics
  - Dedicated website [www.yakult.ie/hcp](http://www.yakult.ie/hcp)
- \*subject to agreement

**Editor: Hannah Baker, science officer,  
Yakult UK Ltd. [hbaker@yakult.co.uk](mailto:hbaker@yakult.co.uk)**