

# 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.co.uk/hcp](http://www.yakult.co.uk/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 groundbreaking 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.

## Yakult Awards

At Yakult we are keen to support young scientists and healthcare professionals, which is why we fund several award schemes through different universities, colleges and schools. Over the last few months, universities up and down the country have been holding award ceremonies to celebrate the success of their new graduates.

### Liverpool John Moores University - the Yakult award for nutrition

This award was given to the best graduating student of the year in BSc (Hons) Nutrition. This was presented at the graduation ceremony to Andrew Gee, who will be continuing his education at Liverpool Hope University, studying for an MSc in Exercise, Health and Nutrition.



-Andrew Gee-

### Manchester Metropolitan University (MMU)

At MMU, first year microbiology students are given an assignment to demonstrate links between microbiology and art. This year Yakult sponsored the project. The winner was David Wickens with his graphic art depiction of eucaryotic microorganisms, in the style of Roy Liechenstein and Leonardo da Vinci.



-David Wickens-

### Oxford Brookes University

This year, two awards were presented at the Oxford Brookes graduation ceremony on 11<sup>th</sup> September. Laura Thomas was given an award for best undergraduate student in Nutrition. Viren Ranawana also received an award for best post-graduate student in Applied Nutrition.

(photos top right)



-Laura Thomas-



-Viren Ranawan-

## 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.

## Conferences and events

We will be exhibiting at a number of conferences during the next couple of months. Come and meet us at the following:



### BAPEN

4<sup>th</sup> and 5<sup>th</sup> November, Harrogate

### Preoperative Association National Conference

6<sup>th</sup> November, London

### Reducing *C.diff* Conference

6<sup>th</sup> November, Ipswich

### Community Nutrition Group

13<sup>th</sup> November, Leeds

### Infection Control Study Day

18<sup>th</sup> November, Norfolk

### Primary Care Live

18<sup>th</sup> and 19<sup>th</sup> November, Manchester

### Nutrition and Health

21<sup>st</sup> and 22<sup>nd</sup> November, London

## 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 - December 2008**

## Contact Us

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

**Write:** Yakult UK Ltd  
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**Phone:** 020 8842 7600

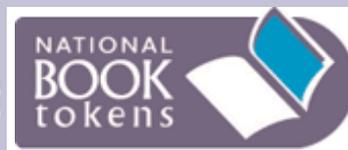


## How can we support you?

- 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.co.uk/hcp](http://www.yakult.co.uk/hcp)

\*subject to agreement

## Win £100 of book tokens!



Just register on the Yakult healthcare professional website (or existing users, re-log in) and you will be entered into a prize draw to win £100 of book tokens to spend on resources for your department\*.

Simply visit [www.yakult.co.uk/hcp](http://www.yakult.co.uk/hcp) and register your details.

\*Terms and conditions can be found below.

Terms and Conditions: 1. Competition open to all UK residents excepting employees of Yakult UK Ltd.; 2. No purchase necessary; 3. Closing date for receipt of entries is 15<sup>th</sup> January 2009; 4. The prize consists of £100 worth of National Book Tokens as specified above; 5. Items may vary slightly from those shown; 6. The promoter reserves the right to substitute the prize for another prize of equal value without notice; 7. Prizes are non-transferable, non-negotiable and no cash alternatives will be offered; 8. The winner will be drawn randomly on 19<sup>th</sup> January 2009 and notified by 23<sup>rd</sup> January 2009; 9. The promoter's decision is final and no correspondence will be entered into; 10. By entering, competitors agree to be bound by these terms and conditions. **Promoter: Yakult UK Ltd., Artemis, Odyssey Business Park, West End Road, South Ruislip, Middlesex HA4 6QE.**

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