



# THE FOOD CHAIN

THE **safefood** KNOWLEDGE NETWORKS NEWSLETTER

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## EXPORTS AND CURRENCY SWINGS ARE CRITICAL ISSUES



ONE OF THE biggest challenges for the food and drink industry in Northern Ireland is currency movement, according to Michael Bell, Executive Director of the Northern Ireland Food & Drink Association ([NIFDA](#)).

"The average net margin for most food manufacturers is below 3 per cent, but the euro/sterling exchange rate has moved over 10 per cent in the last nine months,

and that is beyond the range of some companies to adapt," he says.

While NIFDA can't control currency movement, it does try to create a fair environment, says Michael, a chartered food scientist who helped to found the organisation in 1996. It seeks to give its 102 full and 24 associate members a voice and acts as an "industry self-help" group, he adds.

### TRAINING SUPPLIERS

NIFDA recently pioneered training in the Grocery Suppliers Code of Practice in Northern Ireland. "A retailer may be 20-30 per cent of a supplier's turnover but, almost in every case, a supplier will be a tiny fraction of the retailer's turnover – there is a major imbalance there," explains Michael. "So it is very important that suppliers are trained in understanding their rights and obligations."

Small companies have also benefited from NIFDA's involvement in Access 6, an EU-funded INTERREG project that recently provided training and mentorship to 90 food and drink-related SMEs in border regions in Northern Ireland, the Republic of Ireland and Western Scotland.

"Many small food companies are export-averse, so we created an e-learning training package around exports and an online distribution

tool that lets you plan and cost transport of goods. These are legacies from the project," he says.

"We export four-fifths of what we produce in Northern Ireland. Local food has a lot of advantages relating to air-miles and carbon dioxide. That said, it is very important that we export and that other markets remain open and don't decide they are only going to eat local food."

### EDUCATING CONSUMERS

NIFDA has had a "long and very productive" relationship with **safefood**, according to Michael. "We have the challenges of building more integrity into food on many dimensions: fraud, microbiological and chemical safety," he says, emphasising the importance of consumer awareness. "It is becoming increasingly apparent that consumers need more education to understand these aspects of food products."

## THE ISLAND OF IRELAND NEEDS TO STRIKE A BALANCE BETWEEN ITS INCREDIBLY SUCCESSFUL FOOD PRODUCTION AND THE POTENTIAL LOSS OF BIODIVERSITY, SAYS BROADCASTER ELLA MCSWEENEY. PAGE 5.

# NEWS

## CAMPYLOBACTER FOUND ON MOST CHICKENS

NEARLY THREE-QUARTERS of fresh chickens in the UK tested positive for the presence of campylobacter, according to the final results from a year-long Food Standards Agency survey, which were released in late May. The survey also found 19 per cent of chickens tested positive within the highest band of contamination. Read more on [food.gov.uk](http://food.gov.uk).

## TRANSATLANTIC PARTNERSHIP FOR FOOD SCIENCE

SHARING THE LATEST information on food science and technology is the aim of a new transatlantic partnership forged between the Institute of Food Science & Technology (IFST) in the UK and the US Institute of Food Technologists (IFT). The organisations will share resources and promote international networking opportunities. Read more on [ifst.org/news/ifst-ift-working-together](http://ifst.org/news/ifst-ift-working-together)

## REASONABLE CAFFEINE CONSUMPTION SAFE FOR ADULTS

SINGLE DOSES OF caffeine up to 200mg – about 3mg per kilogram of body weight (mg/kg bw) – from all sources do not raise safety concerns for the general healthy adult population. This is according to a recent Scientific Opinion published by the European Food Safety Authority. The full opinion and related factsheets are available on [efsa.europa.eu](http://efsa.europa.eu).



# OPPORTUNITIES

## SAFEFOOD TRAINING & MOBILITY PROGRAMME 2015

ENHANCE YOUR SKILLS and broaden your expertise by spending time working with another organisation. Collaborate and connect with other food safety professionals on the island of Ireland and overseas. Past participants have attended conferences and courses, and visited organisations across the island, UK, Europe and the US. Knowledge Networks members can apply for a bursary of up to €1,200 (or Sterling equivalent) through the programme. See [safefood.ning.com](http://safefood.ning.com).

## FREE FOOD CHAIN SECURITY COURSE

PROF CHRIS ELLIOTT of Queen's University Belfast will soon re-run his free online training course. The two-part MOOC (massive open online course) will run for two hours a week over two periods of four weeks each. It will focus on threats to global food security, supply chain integrity and the challenges of maintaining healthy and sustainable food supplies. Interested? Register on [futurelearn.com](http://futurelearn.com).

### WHERE DO YOU WORK?

I work in the Food Industry Development Department and we're based within the Research Programme in Teagasc. A key part of our job is to transfer technology and information to industry.

### WHAT IS A TYPICAL DAY AT WORK FOR YOU?

My work varies a lot from giving certified or specialist training to organising events and dealing with enquiries from businesses. These include questions about food labelling, quality and safety standards, and other technical queries. For example, if I were doing a labelling review for a business, they would send in their product information. I'd review that against the legal requirements and give them a report.

### WHAT DO YOU DO ON A TRAINING DAY?

I'm very much hands on and practical. For example, for our food safety training on HACCP, we want businesses to have an up-to-date plan in place at the end of the programme to make it as applied as possible for them.



### DOES YOUR WORK INVOLVE TRAVEL?

There's a reasonable amount of travel across the island of Ireland and some abroad. I'm involved in a European project, [Better Training for Safer Food](#). As part of this, I travel to venues in Europe and deliver training on auditing to groups of officials from across the European Union.

# A DAY IN THE LIFE

ITA WHITE IS A TRAINER CONSULTANT IN THE FOOD INDUSTRY DEVELOPMENT DEPARTMENT, TEAGASC.

### WHAT AGENCIES DO YOU WORK WITH?

We're very involved with Enterprise Ireland and Bord Bia on the FoodWorks programme. This aims to develop a new wave of food entrepreneurs in the Republic of Ireland and we provide the technology arm to that.

I'm also working with Dr James McIntosh from [safefood](#) on food authenticity. We've been working for some months on developing the programme and organising guest speakers for an industry event that took place in June. Hopefully, the event will have improved the knowledge base in the food sector so businesses can protect themselves from food fraud.

### WHAT DO YOU LIKE ABOUT YOUR JOB?

The one thing I love about the job is the variety as no two days are the same. The international angle is lovely, especially because of the different people I get to meet. There's also always something new happening from a technology point of view in Teagasc.

### HOW DID YOU GET INTO THIS AREA?

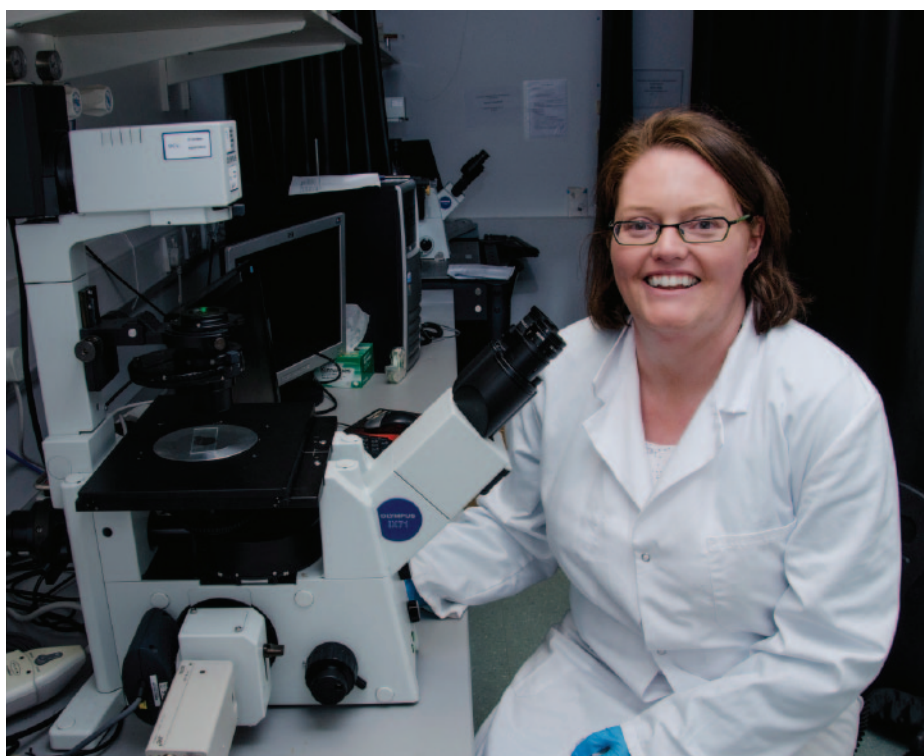
I have more than 25 years' experience working in food-related areas. A long time ago, I studied industrial microbiology in University College Dublin. Before Teagasc, I worked in Bord Iascaigh Mhara (BIM), the Department of Health in the UK, the manufacturing sector, and the European Commission's Food and Veterinary office.

# MY RESEARCH

DR NIAMH GILMARTIN, DUBLIN CITY UNIVERSITY

NIAMH IS A RESEARCH FELLOW IN THE BIOMEDICAL DIAGNOSTIC INSTITUTE AND APPLIED BIOCHEMISTRY GROUP LED BY PROFESSOR RICHARD O'KENNEDY AND BASED IN THE DCU SCHOOL OF BIOTECHNOLOGY.

**"ONE OF THE MAJOR ISSUES IN THE FOOD INDUSTRY IS LISTERIA CONTAMINATION. EVEN IF YOU'RE CLEANING YOUR SURFACES EVERY DAY, YOU CAN GET BIOFILMS THAT SOMETIMES BREAK AWAY FROM THE SURFACE AND CONTAMINATE FOOD."**



FOR THE PAST FEW YEARS, I have worked on a project called BioLiSME [projectbiolisme.eu] for the rapid and easy detection of *Listeria monocytogenes*. This is a European-funded project and is a consortium of various universities and SMEs.

One of the major issues in the food industry is *Listeria* contamination. Even if you're cleaning your surfaces every day, you can get biofilms that sometimes break away from the surface and contaminate food.

The EU regulation in relation to *Listeria* [[Commission Regulation \(EC\) No 2073/2005](#)] is very strict because, as those working in the food safety arena are all too aware, a resulting infection can kill vulnerable people such as the elderly, new-borns, pregnant women and people suffering from immuno-compromising diseases.

## CUTTING WAIT TIMES

One of the major issues with testing for *Listeria* is having to wait up to a week for test results. It is one of the primary issues for food businesses when they are trying to meet the requirements of European food legislation and prove their food is not infected with *Listeria*. The BioLiSME system takes less than an hour from sampling to detection so it's much quicker and easier.

Another improvement is removing the need for pre-enrichment, which is currently done to increase the concentration of *Listeria*. Instead, we use magnetic particles with antibodies specific to *Listeria* to concentrate the cells into a small volume that can be put through our system.

My work on the project included this immunoassay-based detection system as well as finding an antibody that was specific for *L. monocytogenes*, but didn't pick up other *Listeria* species that don't cause infection. This was challenging.

One of the key issues with *Listeria* is that it forms biofilms, because of that, it can withstand environments that would otherwise kill it. Biofilms are notoriously difficult to sample but, with the BioLiSME system, a biofilm sample can be removed from the surface using a combination of air and water, and put through the detection system.

This was also one of the biggest engineering challenges during the project as the regimes that are used to clean up *Listeria* biofilms can be quite harsh. We had to figure out how to get the *Listeria* off the surface without killing it so we could put it through the detection system.

## PROTOTYPES IN ACTION

The project started in 2009 and finished last year. We have two working prototypes, which we have brought to various food businesses in England and Spain. We've found that food firms are very willing to try out new detection systems. Companies that make ready-to-eat products have been most interested in our prototypes as these products are notoriously difficult in terms of *Listeria*.

It was great to get involved in research in Europe and see what was going on in different countries. I enjoyed working in the consortium as everybody brought different expertise to the various problems.

The other partners involved in the project were: the University of Southampton in the UK; AINIA, a technology centre in Spain; Betelgeux, a Spanish hygiene and food safety company; 40-30, a French engineering firm; and the UK-based company Photek, which is a specialist manufacturer of vacuum-based tubes and camera systems for photon detection.

When I'm not in the lab, I enjoy running and cycling. At the moment I'm training to do the Ring of Kerry cycle in July. That takes up a lot of my time!



# ARE VTX-POSITIVE RTE FOODS UNSAFE FOR HUMAN CONSUMPTION?

DR DECLAN J BOLTON IS A PRINCIPAL RESEARCH OFFICER, FOOD SAFETY DEPARTMENT, TEAGASC FOOD RESEARCH CENTRE, ASHTOWN, DUBLIN 15.

Verocytotoxigenic *E. coli* (VTEC), also called Shiga toxin-producing *E. coli* (STEC), are now one of the most common causes of foodborne bacterial infection worldwide. The symptoms in humans range from mild diarrhoea to hemorrhagic colitis, hemolytic uremic syndrome (HUS), and thrombocytopenic purpura.

The VTEC group includes many different serogroups, some of which are more prevalent in human infections. Moreover, different strains may carry different combinations of virulence genes in addition to the *vtx* gene(s).

While the vast majority of pathogenic strains are Enteropathogenic *E. coli* (EPEC) that carry *vtx* genes, a major outbreak (4,321 confirmed cases, 852 HUS and 54 deaths) was associated with an Enteraggregative *E. coli* (EAEC) in 2011 in Europe.

The serogroups most frequently associated with severe human disease are O157, O26, O111, O103, and O145, and are regarded as the “top five”. After the 2011 outbreak, O104 was added to this list. Other serogroups including O91, O113, O117, O146 and O128 are also associated with human illness<sup>1</sup>.

## SAFE FOR HUMANS?

The European Food Safety Authority (EFSA) recently concluded that it is not possible

to define human pathogenic VTEC absolutely, either in terms of serogroup or virulence gene combination. Although additional genes such as *eae* (for VTEC) and *aaiC* plus *aggR* (for EAEC that have acquired the *vtx* gene) may be associated with a higher risk in terms of occurrence and severity of illness, their absence does not mean the strain is non-pathogenic. The question therefore arises, if *vtx* genes are detected in a ready-to-eat (RTE) food, should this food be declared unfit for human consumption?

Policy-makers often use the precautionary principle to justify discretionary decisions when the possibility exists of harm and in the absence of clear scientific knowledge. This principle was recently applied in the revision of Article 14 of Regulation (EC) No 178/2002, which concluded that all RTE foods testing *vtx*-positive by PCR are ‘unsafe’ and should be ‘withdrawn or recalled from retail’ and subject to ‘corrective measures to eliminate the VTEC hazard’. As there is no corrective action for some RTE foods, the only option is disposal, which is expensive and arguably contrary to efforts to supply food to the ever-expanding global population.

## GENES LINKED TO ILLNESS

The risk of serious human illness is related to the presence of *vtx* genes, but only when present with other key virulence factors in the same organism. To the best of our current knowledge, these other virulence factors are *eae* (intimin

production) or *aaiC* (secreted protein of EAEC) plus *aggR* (plasmid encoded regulator)<sup>1</sup>.

Thus, as concluded by EFSA, an RTE product contaminated with O157, O26, O103, O145, O111 or O104 in combination with *vtx* and *eae* or *vtx* and *aaiC* plus *aggR* genes, presents a high risk for diarrhoea and HUS.

Other serogroups, in combination with the same genes, present a high risk for diarrhoea and an unknown risk for more serious illness.

Outside of this serogroup-virulence gene combination framework, the risk and severity of human illness is unknown.

## PCR TESTING NEEDED

All RTE products should therefore be tested initially using PCR for the presence of *vtx* genes. If these are absent, the RTE food does not present a risk of VTEC infection. If PCR positive, *E. coli* should be isolated from the food and tested for the presence of *vtx* plus *eae* (VTEC) and *vtx*, *aaiC* plus *aggR* (EAEC-VTEC) using PCR methods.

If these gene combinations are present, the food should be considered unsafe for human consumption and disposed of or used in a product that will be subject to cooking at temperatures sufficiently high to kill any *E. coli* present. The main issue, however, is what to do with RTE foods that are contaminated with *E. coli* that are *vtx* positive but negative for *eae* or *aaiC* and *aggR*.

Such *E. coli* may have alternative attachment factors such as *saa*

(STEC agglutinating adhesion), common in O113 strains. Alternatively they may not be associated with illness in humans. Put simply, the risk is unknown.

## IRISH RESEARCH

Research undertaken at Teagasc Food Research Centre, Ashtown<sup>2,3</sup> found that, on average, 15 percent of VTEC isolates that are *eae* negative carry the *Saa* mechanism.

Some of these strains; O33:H11 and ONT: H11 each carried *vtx* gene variants (Vtx2c and Vtx2dact) associated with an increased risk of HUS<sup>4</sup>. Further evidence for the importance of *eae* negative VTEC in human infections comes from the human infection data reported to the European Centre for Disease Prevention and Control (ECDC). Between 2007 and 2010, 770 (10.6%) of confirmed cases, where the causative VTEC was isolated and characterised, were attributed to *eae* negative VTEC<sup>1</sup>.

Based on these data, it can be concluded that consuming RTE foods contaminated with *eae* negative VTEC would inevitably result in human infections and such food therefore represents a risk to public health.

There seems little option but to remove such products from the food chain unless corrective action, such as heat treatment, can be applied to kill any VTEC present.

See this article on [safefood.ning.com](http://safefood.ning.com) for full references noted as 1-4.



DR DECLAN J BOLTON

## ELLA'S LIFE AND LIKES

**LIVES:** Between Dublin and “beautiful, dramatic, rural” New York, with partner Mark and their two young sons.

**HOBBIES:** Running and hillwalking with friends.

**PETS:** Not at the moment, too much to-ing and fro-ing!

**FAVORITE BOOKS:** Anything by John McGahern, and Harry Potter with the kids.

**FAVORITE PODCAST:** Serial.

**INTERESTING FACT:** She realised she wanted to be a broadcaster when she was about nine or ten. On hearing an interview on the radio, she thought, “I want to do that!”



“THE ISLAND’S AGRI-FOOD SECTOR IS DEFINITELY WELL POSITIONED TO BE VERY SUCCESSFUL”

“THE ISLAND’S AGRI-FOOD sector is definitely well positioned to be very successful, but it needs strong leadership and there are huge challenges,” says Ella, who is well-known for her work on magazine programmes such as *Ear to the Ground* and *The Consumer Show*, as well as numerous radio documentaries and series.

“We have so many benefits here. We are an island, we have a good international reputation and this incredible free resource of grass growing everywhere.”

### PROTECTING FARMERS IS KEY

Uppermost among the challenges are the pressures facing farmers, which can affect the food chain and the environment, notes Ella. “Where you marginalise farmers, you marginalise animals; issues such as antibiotic use and dealing with climate change are very difficult to deal with,” she says.

“We need to protect the farmer’s role in food production and make sure they get a good margin for what they do and not fall into debt.”

### STRIKING THE BALANCE

Ella, a Trinity College Dublin science graduate, has written extensively about the perils of overusing antibiotics in farming and she is also concerned about

biodiversity loss on the island of Ireland.

“There is a balance to be struck between incredibly successful production and also making sure that we don’t push aside what we have naturally,” she says. “We don’t want to find ourselves in 20 years saying everything we had is no longer here.”

She also laments that here we seem to be attuned to working in sectors rather than as a more connected network, which would help address issues of food security and safety, and environmental protection.

“For example, issues such as VTEC, *Campylobacter*, *Listeria* and *Salmonella* demand not only immediate dissemination of information, but also a look right across the food chain,” she says.

“There is no point in looking at these issues in isolation. They have to be tracked at a minute level across the food chain. This is the only way to understand what is going on.”

In that regard she has found the **safe food** Knowledge Networks a trove of relevant and timely news. “To have that dissemination of information right across all aspects of the food chain is really

## ELLA MCSWEENEY LOOKS TO THE BIG PICTURE OF THE FOOD CHAIN

THE ISLAND OF IRELAND HAS A MASSIVE OPPORTUNITY IN THE AGRI-FOOD SECTOR, AS OUR ABUNDANCE OF GRASS AND TEMPERATE CLIMATE ARE THE ENVY OF OTHER COUNTRIES, ACCORDING TO BROADCASTER **ELLA MCSWEENEY**. IF WE DON’T PROTECT FARMERS AND BIODIVERSITY, AND IF WE DON’T KEEP AN EYE ON THE ENTIRE FOOD CHAIN, WE WILL LOSE GROUND.

helpful for someone in my job,” she says.

### INCLUSIVE FOOD POLICY

Top of Ella’s wish list for the island of Ireland would be a food policy that takes the bigger picture into account. “We have never had such

a food policy,” she says. “But if you look at examples from other countries where their food policies are designed to be inclusive of jobs, agriculture, science, health and environmental impact, you get this powerful connectedness that serves the public well.”



# SALMONELLA CONFERENCE EXAMINES FOOD- CHAIN HOTSPOTS

HOW CAN WE optimise meat inspections for *Salmonella*? Or trace bacteria back along the food chain if an outbreak erupts? And how can we best prevent contamination in raw or fermented artisan food products?

Those were some of the topics discussed at the **safefood** *Salmonella* Knowledge Network annual conference in April, which put the focus on supply chain management issues in the meat and dairy industries.

Around 70 delegates from industry, regulatory bodies and research attended the workshop at the DAFM Laboratories in Co Kildare. They discussed issues ranging from the diversity of food products where *Salmonella* can be a problem – including its emergence in low-moisture foods – to improving methods of tracking and preventing contamination.

Pork is a significant source of *Salmonella* outbreaks, and Professor Lis Alban from the University of Copenhagen spoke about abattoir inspections of pigs ante- and post-mortem. Dr Joost Smid from the University of Utrecht spoke about work from the EU-funded Biotracer project to detect microbial contamination and model its path back through the food chain.

Artisan and dairy products were also up for discussion, with Dr Lisa O'Connor from the Food Safety Authority of Ireland speaking about raw milk, while Dr Vasco Cadavez from the Polytechnic Institute of Braganza in Portugal highlighted factors that affect the microbial safety of traditional dry fermented sausages.

Food products that lack a critical cooking step pose a particular challenge for food safety management, according to **safefood** *Salmonella* Knowledge Network Facilitator Professor Francis Butler, who organised the meeting.

"The reality is pathogens are present and there is a food safety risk associated with these products," says Francis, who is Head of the School of Biosystems Engineering at University College Dublin. "There is no magic bullet here and the problem won't be solved by increased testing. We have to think long and hard about a code of practice and the steps that can be put in place."

Find the conference presentations on [safefood.ning.com](http://safefood.ning.com).



L-R: Prof Francis Butler, UCD; Prof Lisa Alban, University of Copenhagen; and Dr Joost Smid, University of Utrecht

# RISK MANAGEMENT HIGH ON AGENDA AT LISTERIA CONFERENCE



L-R: Dr Kieran Jordan (Teagasc), Dr Wayne Anderson (FSAI), Ms Dara Leong (Teagasc), Dr Gary McMahon (Moy Park), Dr Áine Regan (UCD) and Dr John Holah (Holchem Laboratories Ltd, UK).

NEW PROCESSING TECHNOLOGIES and the benefits of whole genome sequencing were among the topics discussed at the recent **safefood** *Listeria* Knowledge Network Conference held at Teagasc in Moorepark, Co Cork.

At the event, over 70 participants debated critical current and future issues along the theme of 'Managing and communicating risks related to pathogens in food'

"In addition to application of modern technology, the more traditional issues like awareness, education and the ability of food to support growth are still important and relevant for the food industry," says Dr Kieran Jordan, the *Listeria* Network facilitator.

The first two presentations of the conference concerned the identification of the hazards associated with *L. monocytogenes*. These were followed by presentations on control of *L. monocytogenes*, from a practical and statistical approach.

Risk management was covered in the final presentations, during which ways to manage identified risks and approaches to risk communication in a crisis situation were discussed.

The current and future issues discussed included education and awareness, new processing technologies, capitalising on the benefits of whole genome sequencing, undertaking challenge studies and the identification of virulence factors.

"Different sectors need to work together in order to protect public health and build up trust in the food supply", said Dr Áine Regan from University College Dublin (UCD), who presented at the conference. "From my own perspective, I've been very much focused on the risk communication side, so it's great to get an insight into all of the other areas."



Network Facilitator Dr Kieran Jordan leads the emerging issues discussion.

# IN BRANDS WE DON'T TRUST – FOOD COMPANIES NEED TO MOVE WITH THE TIMES

THE FOOD INDUSTRY needs to work harder to keep up with consumer trends and many existing brands need to change their ways.

That's according to Dr Kenneth McKenzie, Strategic Planning Director with Dublin-based ad and marketing agency Target McConnells, who has been watching food-related developments with a keen eye.

## UNCOMFORTABLE CHANGES IN GROCERY RETAIL SECTOR

One of the most remarkable disruptions in food retail is how discount chains such as Aldi and Lidl have changed the meaning of a food brand, he says.

"Brands used to be guarantees that the product you were going to eat was safe and of good quality, and that made perfect sense in the industrial revolution and even in the 20th century.

Now these retailers are showing consumers that low prices don't have to mean any real loss in food quality.

You may have never heard of this brand of tuna or jam but, when you try it, you find it is probably better than the one from the brand with 100 years

of heritage behind them. It's fascinating and it's uncomfortable thinking for a lot of existing brand owners."

## FOOD AS EXPERIENCE

The challenge is compounded by a more questioning vein among some consumers, with more focus on the provenance, craft and manufacture of food. To move with the times, small-scale food and drink producers and companies need to make their fare more of an experience, notes Kenneth.



KEN  
MCKENZIE

"Companies need to think about how they get their food product into a café or restaurant or on a stall as well as make it for sale in their own shop, maybe even by running a pop-up shop," he says.

## FUTURE CHALLENGES

In the context of this changing environment and a reduction in brand loyalty, guidance for consumers on the safety and quality of their food is more important than ever.

The regulatory authorities and other food agencies need to have the technical expertise and communication skills to build and maintain trust, and provide the reassurance that consumers require.

# EMPOWERING PEOPLE TO BEAT FOOD POVERTY

MORE THAN 12,000 people took part in the first year of **safefood's** Community Food Initiatives Programme 2013-15, according to a recent evaluation.

"All the projects are achieving their objectives," says Georgina Buffini, a Development Worker at Healthy Food for All, which manages the programme. "The projects are engaging with local people around food poverty related issues and participants say this is affecting their food behaviours."

Community Food Initiatives (CFIs) help improve the affordability and accessibility of healthy foods at a local level for low-income groups, by using a community development approach. Georgina explains: "The programme aims to ensure the sustainability of CFIs in the long term. It's about encouraging local people to participate and empowering them to identify and address local food poverty issues."

**safefood** is funding 10 CFIs on the island of Ireland. The Ballybeg Community Development Project in Waterford is one of

these. "It's a densely populated, very disadvantaged area with a high level of unemployment," says Georgina.

One programme in Ballybeg targets low-income families. "Not only are they getting the practical skills of growing and cooking, this healthy cooking and nutrition learning gets transferred to the home."

Georgina says this improves access to healthy food for people on a stretched and limited budget. See [healthyfoodforall.com](http://healthyfoodforall.com) or [safefood.eu](http://safefood.eu) for more information.



# UPCOMING EVENTS

For full event listings, see [safefood.ning.com/events](http://safefood.ning.com/events).

## Westminster Food & Nutrition Forum Keynote Seminar

Central London, UK

Food labelling policy: progress on the European Food Information to Consumers regulation, and next steps for country-of-origin, nutritional and alcohol labelling

July 9th, 2015

## Second International ECMIS Symposium

E. coli and the Mucosal Immune System

Het Pand Convention Centre, Ghent, Belgium  
July 10th-13th, 2015

## Summer Academy in Global Food Law and Policy 2015

Bilbao, Spain

July 20th-24th, 2015

## ICFSNPH 2015: XIII International Conference on Food Safety, Nutrition and Public Health

Zurich, Switzerland

July 29th-30th, 2015

## 4th International Conference and Exhibition on Food Processing & Technology

Crowne Plaza London Heathrow, UK

Aug 10th-12th, 2015

# SPEAKING OF FOOD SAFETY – CREATING RESOURCES FOR THE BLIND

THERE IS AN ALMOST infinite amount of interesting reading material at the touch of a button these days, but what happens if you're blind or visually impaired?

"It's important that information is imparted and provided to people in a format they're able to access," says Lina Kouzi, Library and Media Services Manager for the National Council for the Blind of Ireland (NCBI). Lina has been working with Dr James McIntosh, Chief Specialist in Toxicology at **safefood** for the last couple of years to create food safety braille documents and audio files.

"There is a training centre in NCBI and cookery programmes are part of that. We produced the **safefood** leaflets in audio and in braille, and they used them as part of the teaching curriculum," James explains.

The 10 leaflets translated included *Fridge hygiene*, *The ABC to BBQs* and *Cooking meat safely*. Having them proved particularly useful for the food management course, which includes topics such as food hygiene and preparing for barbecues, according to Lina.

The leaflets are also available in Northern Ireland through the local libraries service and Libraries NI. In addition to this, the Royal National Institute of Blind People (RNIB) in Belfast has distributed copies of the CD resource pack to all their community staff.

The NCBI provides a library service in the Republic of Ireland that is different from most other public or academic libraries. "Not only do we distribute books, but we make books, so we are a distribution and production unit, which is quite unique," says Lina.

Library members can choose from a collection of over 16,000 titles in braille, audio and large print. One book that has proven popular among members is 101+ Square Meals. "The 101 recipes went down very well as it gave the client an idea on how to budget for meals and eat healthily," she adds.

The print version of this book was the initiative of Limerick Money Advice & Budgeting Service (MABS) with contributions from the Health Service Executive (HSE), Limerick Vocational Education Committee (VEC) and **safefood**. It is available in audio from the NCBI library and online at [safefood.eu](http://safefood.eu).



Michael Robinson, NCBI reader, recording in studio

## PRODUCING BOOKS FOR THE BLIND

For audio books, there is a recording studio in the NCBI, where a reader and sound engineer work to produce the file. The braille process is quite different. The relevant document is converted into Microsoft Word and software is used to transfer it into braille. Once produced, it is sent through braille embossers before being added to the library shelves.

For those that are technologically literate, modern synthetic speech software can be used to read back information on most websites and in documents. Lina explains that, despite technological advances, she has seen the demand for the library service grow and grow over the past decade.

"Many of our clients are older due to age-related eye problems, but we cater for all age groups. That's why we need to keep our services varied in format delivery in order to cater for the different requirements for different age groups."

# GET INVOLVED WITH THE FOOD CHAIN

We'd love to hear from you. Would you like us to feature your research or industry sector? What else would you like us to cover in the world of food safety? Send your letters, article ideas, feedback and suggestions to [networks@safefood.eu](mailto:networks@safefood.eu) or contact our facilitators below.

We'd also like to welcome new recipients of The Food Chain from the **safefood** Chemical Residues and Biotoxins Networks!

## VTEC NETWORK

Dr Geraldine Duffy, Teagasc Food Research Centre (Ashtown), Dublin.  
[Geraldine.Duffy@teagasc.ie](mailto:Geraldine.Duffy@teagasc.ie)

## CAMPYLOBACTER NETWORK

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# COMPETITION

Darren Hand (right) was the Issue 2 competition winner. Darren, a Laboratory Analyst at the Department of Agriculture's Central Veterinary Research Laboratory in Kildare, was delighted with his prize – a luxury hamper of gourmet food from the Arcadia Delicatessen in Belfast.



Answer our trivia questions to win a luxury hamper of gourmet food from the Arcadia Delicatessen in Belfast!



1. What are ludericks, morwongs and mon-keyface pricklebacks?
2. Esopus Spitzenburg, Ashmead's Kernel and Calville Blanc d'Hiver are varieties of what?
3. Where could you have melonpan, coffee jelly or imagawayaki for dessert?

Send your answers to [networks@safefood.eu](mailto:networks@safefood.eu) before July 31st, 2015. Good luck!