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www.preparedfood.com.au
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Extravagant, indulgent descriptors can increase healthy food selection

Want to increase sales overall or consumption of certain foods? It could all get down to your product names and descriptions.

Indulgent labelling using flavourful, exciting descriptions was recently applied to vegetables by some Stanford University psychology students. More diners selected the vegetables if they had indulgent, decadent descriptions. Vegetable consumption actually increased simply by revving up the naming.

This technique could be used to make healthier foods more appealing and encourage people to make healthier dining choices.

Traditionally people assume healthy foods are less tasty, less enjoyable, less filling and less satisfying than standard foods. This is obviously not necessarily true but it does make “selling” healthier diets more challenging.

In 2011, Alia Crum, an assistant professor of psychology and principal investigator of the Stanford Mind & Body Lab, led a team that looked at the hormonal response when test participants were given milkshakes labelled as “low-calorie and restrictive” or the same milkshake with a “high-calorie and indulgent” label. When participants thought the milkshake was low-calorie their ghrelin (hunger hormone) levels were higher than when they thought the milkshake was the more indulgent version.

In the current study the researchers collaborated with Stanford Residential & Dining Enterprise to test how labelling could impact consumption of healthier menu choices. Labeling was divided into four options: basic, healthy restrictive, healthy positive or indulgent.

Green beans, for instance, were described as “green beans” (basic), “light ’n’ low-carb green beans and shallots” (healthy restrictive), “healthy energy-boosting green beans and shallots” (healthy positive) or “sweet sizzlin’ green beans and crispy shallots” (indulgent).

Research assistants monitored the number of diners who chose the vegetable and how much was consumed over the course of each lunch period for 46 days. There were no changes to how the food was prepared or presented throughout the study.

The researchers found that labelling vegetables with indulgent descriptions led more diners to choose vegetables and resulted in a greater mass of vegetables served per day. Diners chose vegetables with indulgent labelling 25% more than basic labelling, 35% more than healthy positive and 41% more than healthy restrictive. In terms of mass of vegetables served per day, vegetables with indulgent labelling were consumed 16% more than those labelled healthy positive, 23% more than basic and 33% more than healthy restrictive.

This simple and low-cost strategy of altering the descriptions of healthy foods could have a substantial impact on consumption of nutritious foods in dining settings.
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Event details

When: Monday, 11 September–Thursday, 14 September 2017
Where: ICC Sydney, Darling Harbour
Opening hours: Mon–Wed 10 am to 6 pm, Thu 10 am to 4 pm

Who should attend? Fine Food Australia and Commercial Drinks 2017 are trade-only events for professionals working in the foodservice, hospitality, retail and liquor industries. As this is a business event, organisers ask that visitors not bring anyone under the age of 15. Proof of age and industry involvement may be requested at the door. All visitors to Commercial Drinks must be over the age of 18.

Pre-event online registration is free for industry members. Registrations close Friday, 8 September at 5 pm AEST. An on-site registration fee of $30 will apply at the event for those who do not pre-register.

For more details, visit the website: www.finefoodaustralia.com.au.

Fine Food Australia is the premier trade exhibition for the food industry. Showcasing the latest products, the event attracts buyers from restaurants, cafes, bakeries, retailers, caterers, bars, hotels and other food businesses from across the country.

This year’s event, running from 11–14 September at ICC Sydney, also incorporates 2017 Commercial Drinks, an industry event dedicated to bars and venues which promises to showcase the latest trends in top craft and artisan beer, wine and spirits brands.

According to the organisers, Fine Food Australia is more than a trade exhibition — it’s a four-day celebration of new ideas, innovations and techniques, and the perfect opportunity to see first-hand what’s next for the food industry.

Attendees can explore products from over 1000 exhibiting brands across a range of categories, including: general and specialty food; catering equipment; hospitality equipment; bakery; drinks; coffee; tea; dairy; meat and seafood; retail and technology; fitout and design; packaging; natural, organic and free-from; and on-premise liquor.

With an expected attendance of between 20,000 and 25,000 food industry professionals, Fine Food Australia is also an opportunity to network with chefs, restaurateurs, and cafe and bar owners, and to meet face-to-face with leading vendors to negotiate better supply and distribution deals.

Organisers say attendees can learn from industry leaders and successful operators when it comes to practical solutions for common food business issues such as staffing, profitability and operating efficiencies. They promise insights into the top trends affecting the industry, highlighting how businesses can remain in step with changing consumer demands.

In addition to the vast range of products on show, Fine Food Australia features a range of informative and entertaining sessions across the four days:

• The Australian Culinary Challenge — Chefs, trainees and apprentices will compete against each other for a share of $20,000 in cash and prizes.

• Bake Skills Australia — Watch apprentice bakers from every state in Australia compete in a live bakery challenge across a range of product categories, including speciality and artisan breads, pretzels, croissants and more.

• Cafe Stage — Leaders in the cafe industry will be running interactive masterclasses and discussions, providing new ideas and inspiration for cafe owners.

• Innovations in Patisserie Stage — This is the site for expert advice and an opportunity to learn techniques and be inspired by leading pastry chefs as they demonstrate a series of masterclasses on desserts, cakes and more.

• Live Bakery — The experienced EOI bakery team will be showcasing new recipes, holding baking demonstrations, sharing their tips and offering expert advice to bakers.

• New & Export Ready Product Showcase — Find the most exciting product launches and innovative ideas to hit the
foodservice, catering, retail and bakery industries in the last 12 months, or source products that are export-ready. A list of the products featured in the 2017 showcase will be released closer to the event.

• **Talking Food Stage** — Come and listen to a line-up of industry insiders as they share their experience and knowledge and provide great new ideas for business owners and operators.

• **Nestlé Golden Chef’s Hat Award National Final** — Australia’s longest running culinary competition sees finalist teams cook-off live in front of an industry audience in entrée, main and dessert course categories.

• **The Official Great Aussie Pie & Sausage Roll Competition** — Paying homage to Australia’s much-loved icon, the perfect pie, this competition is open to all pie-making professionals across Australia.

• **Women in Foodservice Charity Event** — This intimate brunch celebrates women in the food industry, with key speakers sharing their journey to success. All profits from the event will be donated to selected charities.

• **Speakeasy Stage** — This stage will host some of Australia’s most influential and successful players in the on-premise liquor industry as they share their experience and knowledge, providing tips and ideas for bar owners and operators.

**Confirmed sessions include:**
- Learn from the best — what does it take to run a successful bar?
- Celebrating the Australian gin craze: horizontal tasting session (strictly limited to 40 people)
- The next wave of the craft beer revolution
- Celebrating Australia’s liquid gold — a focus on whiskey
- PR, marketing and organic reach

Additional information on these and more sessions will be made available closer to the event, so keep an eye on the website for further details.

**Diversified Exhibitions Australia**
www.divexhibitions.com.au

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**Investigating the interplay of genes, diet and lifestyle**

A new collaboration between the University of Auckland-based Liggins Institute and the Murdoch Childrens Research Institute (MCRI) has received $1.5 million from the Ministry for Business, Innovation and Employment’s Catalyst Project fund to investigate the interplay between genes, diet and lifestyle.

It is hoped that the ‘GENO Project’ will generate discoveries that could lead to treatments and prevention of some of the most serious diet-related health issues facing Australia and New Zealand today.

GENO stands for the New Zealand-Australia LifeCourse Collaboration on Genes, Environment, Nutrition and Obesity. Specific research projects include:

- developing methods to predict how each individual’s DNA sequence contributes to their health and wellbeing and better predict obesity risk and the outcome of targeted interventions;
- an investigation of the critical role of micronutrients (vitamins, essential fatty acids, amino acids, and minerals) in metabolic health.

The collaboration gives researchers at the Liggins Institute access to a wealth of data from the Longitudinal Study of Australian Children (LSAC), which has followed 10,000 children since 2004. This includes 150,000 blood and other biosamples collected by MCRI’s landmark Child Health CheckPoint project, which also produced an in-depth snapshot of the physical health of nearly 2000 LSAC parent-child pairs when the children were 11–12 years old.

Two National Science Challenges based at the Liggins Institute, ‘A Better Start’ and ‘High Value Nutrition’, will also benefit from the collaboration.

The MCRI, based at the Royal Children’s Hospital in Melbourne, will benefit from the Liggins Institute’s international leadership in both nutritional systems biology, which uses computer models to illuminate the interplay of genes, diet and lifestyle as well as methods to reveal the ‘genetic architecture’ of health and disease.

GENO will also generate PhD and postdoctoral opportunities that will grow New Zealand and Australia’s future researchers and open up new potential international investment in research in the two countries.
Absorbent pad works in packaging and during cooking as well

Dri-Fresh Supreme pads are really double-function — they offer effective absorbency in the pre-packed state, then they come into their own during the cooking process. This is when they will absorb fat and juices released which result in cleaner, crispier, healthier food and safer easier handling.

The pads are even suitable for use in high-temperature packaging operations — skin packaging/MAP and thermoformed packaging — as they combine the necessary temperature resistance for the process with the absorbency required for the product. The pads can be used in ovens at up to 200°C.

“From the moment they are packed the pads will absorb any excess liquid — and then during cooking these absorbent pads will absorb fat and juices released during cooking, resulting in cleaner, crispier, healthier food,” claimed Jeremy Haydn-Davies, sales director, Sirane.

Available in a range of colours including black, white and silver, the ovenable pads can be made in custom sizes to suit the different trays used by manufacturers. A range of absorbency levels is offered and odour absorbency can be integrated into the pads as well. For even more versatility, the pads can also be combined with products such as the Sira-Cook Supreme oven/BBQ cooking bag for an all-in-one retail cooking bag with integrated absorbency.

Nonna’s
www.gourmetsausages.com.au

Birch & Waite Professional Whole Egg Mayonnaise has won the Chefs Decision Award for mayonnaise. More than 300 chefs across the nation were given the opportunity to vote for their favourite products based on taste, ease of use, value, texture and versatility and 73% preferred Birch & Waite Professional Whole Egg Mayonnaise over any other participating brands (including Hellmann’s, Masterfoods, Praise and Kraft).

A family-run business with 30 years of Australian heritage, Birch & Waite crafts every batch of gourmet mayonnaise into easy-to-use and versatile flavour profiles including Aioli Garlic, Italian Truffle, Smokey Chipotle and Whole Egg.

Batch-crafted, all Birch & Waite Professional Mayonnaises are made with 14% pasteurised whole eggs and made with food professionals in mind to provide the best taste with no compromise.

The European recipe creamy fresh chilled mayonnaise is available 1 L, 2.3, 10 and 20 kg packs and has a six-month shelf life.


Birch & Waite Foods Pty Ltd
www.birchandwaite.com.au

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Whole egg mayonnaise

Sauces and jus

Serious About Sauce is the latest range of sauces and jus from Nonna’s Gourmet Sausages and Deli, developed by the company’s in-house chef.

Sauce flavours include Forest Mushroom, Peppercorn, Madagascan Apple and Thick Onion Gravy. Jus flavours include Beef, Duck and Chicken and come in a rich concentrate.

The jus and sauces have all been created as part of a four-day cooking process. Each product is preservative-free.

Nonna’s
www.gourmetsausages.com.au
We’ve hatched a fabulous new finger food range!

Sunny Queen’s egg-based finger food range brings a cracking selection of delicious options and benefits to the table.

- **Saves time** – gain back valuable time during busy catering service
- **Adds variety** – a fresh new alternative to traditional fried foods
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- **Food safety** – remove raw eggs from your kitchen

### Egg Bites

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  - Creamy Fetta & Spinach
  - Caramelsed Onion & Parmesan
  - Egg White with Vegetable

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In June 2013, Mater Private Hospital Brisbane implemented an innovative 5-star hotel-inspired food service model, allowing patients to choose their meals when they feel like it. Mater was the first hospital in Australia to offer this hotel-style room service to patients and following significant improvement in key outcomes, the service was extended across Mater’s South Brisbane campus in 2016. The response from patients has been overwhelmingly positive and it is not only changing the way patients feel about hospital food but is also decreasing waste, improving patients’ nutritional intake and adding to the organisation’s bottom line.

Driven by a desire to create a better service for patients, ‘Room Service’, which enables patients to order from a personalised clinically appropriate menu, was implemented through a strong collaboration between Nutrition and Dietetics, and Food Services.

Like many hospitals in Australia, prior to implementing Room Service there was a fully manual, paper-based model in place. Patients completed their menu choice well in advance of the mealtime, often with little interaction with staff. Traditional set meal times were scheduled with dinner being served as early as 5.30 pm. Many late and extra meal deliveries were required as a result of these ordering practices.

Under this model, patient satisfaction with food was rated poorly during feedback surveys, their nutritional intake was suboptimal and high levels of plate and kitchen waste were also recorded.
Room Service is a system most commonly seen in the USA and more closely resembles a hotel-style model than a hospital food service system. One a-la-carte style menu integrates therapeutic diets with educational symbols used to assist patients understand appropriate choices. Patients order their meals anytime between 6.30 am and 7 pm via trained call centre staff and their meal is prepared fresh and delivered within 45 minutes.

The model is underpinned by a sophisticated electronic menu management system that monitors meal choices for every patient, ensuring that patients receive options compatible with their medical condition, but also alerts staff if patients miss meals and allows their nutritional intake to be consistently monitored. This is increasingly important with prevalence of malnutrition in hospitals averaging 30%.

Four key measures were developed and documented in Mater’s Room Service balanced scorecard:

- Patient satisfaction via external and statewide benchmarking tools.
- Nutritional intake via CBORD Mobile
Intake software and patient consumption data.

• Plate waste and reasons for waste through observation and patient interviews.

• Kitchen food cost savings.

While nutritional intake has significantly increased in the Room Service model, there has also been a consistent 20% reduction in total food costs and an average 17% reduction in plate waste, compared with the traditional model. Some of the greatest plate waste reductions have been seen in patient groups who are the most difficult to feed, such as the oncology population, which recorded an average plate waste at 9%.

Reduced overall waste and cost savings are due to reduced stock holding and kitchen waste in the move to the cook-on-demand model, rather than predicting patient choices in advance. Use of the sophisticated electronic menu management system allows quick and easy menu changes to be made using patient preference data according to popular or unpopular items and can also be adjusted to incorporate seasonal produce, further reducing costs of food purchased.

Patient surveys have seen satisfaction with the quality and flavour of the food increased to be within the top 5–10% of peer hospitals.

There has been a clear meal order pattern when patients are left to order their meals themselves which has also assisted to reduce unnecessary food waste. There has been a reduction in snack items delivered at traditional mid-meal times yet despite this, total daily nutritional intake has increased as patients consume almost all of the food when they do order.

The number one lesson learned is that if patients are left to decide for themselves what and when they will eat (within medically determined diet restrictions), their satisfaction increases, their nutritional intake increases and waste and costs decrease.

The implementation of a sophisticated electronic menu system coupled with an agile cook-on-demand model allows a customer-focused, clinically appropriate and safe food service model to be implemented across a wide range of patient groups with varying individual needs.

To find an Accredited Practising Dietitian (APD), visit the ‘Find an APD’ page of the DAA website at daa.asn.au or call 1800 812 942.

*Sally McCray is an Accredited Practising Dietitian and the Director of Nutrition and Dietetics at Mater Group. She has worked within clinical dietetics for the past 20 years in a number of hospitals throughout Queensland as well as in Canada. She has also had experience working within a number of different healthcare foodservice production and delivery models as well as in restaurant and hotel foodservice environments.

Sally was instrumental in planning and implementation of the Room Service model and led the development and measurement of their balanced scorecard key outcomes associated with Mater’s Room Service implementations. One of Sally’s particular areas of interest is the manipulation and development of innovative foodservice models to achieve optimal patient clinical outcomes, healthcare cost management and customer satisfaction.

Sally was awarded the 2017 Dietitians Association of Australia’s Presidents Award for Innovation for her work on the Mater’s Room Service Choice on Demand initiative.

**Nutritional drink**

IsoWhey Clinical Nutrition Advanced 55+ has been specifically formulated to support healthy ageing and the maintenance of an active lifestyle. The product features a range of beneficial ingredients to provide nutritional support for people aged 55 and over, including 23 vitamins and minerals.

The product benefits bone health, with calcium and vitamin D helping reduce the risk of osteoporosis. It helps muscle maintenance with the presence of whey protein and BCAA. Vitamins C, B3 and B12 contribute to normal neurological function, as well as MCTs, while vitamins C, B6 and B12 contribute to a normal immune system and energy. Vitamins A and B2 contribute to normal vision and digestive balance is provided by fibre, probiotics and digestive enzymes.

Designed to be taken in the form of just one glass a day, the product is available in vanilla and chocolate flavours. It is gluten-free and has no artificial colours, flavours or sweeteners.

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www.isowhey.com.au
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Growing demand for meat alternatives

Increasing consumer concerns over sustainability and the global food chain, the rise of veganism, plant power and clean eating trends have facilitated diverse new product innovations in the global meat substitutes market, according to Innova Market Insights.

The meat substitutes market is reported to be growing at 8.7% annually in the US and 4.9% in the UK. As part of this trend, even major meat companies are investing in start-ups and companies making plant-based and vegan meat substitutes.

But formulating meat-alternatives is not simple — especially as consumers want their tasty meat analogs to be low in sodium. Traditionally, significant amounts of salt have been added to the products to overcome common off flavours from plant protein.

Israeli company Salt of the Earth has completed a series of trials of plant-based, vegan and vegetarian meat alternatives that contained less sodium. Instead they incorporated their Mediterranean Umami clean-label sodium-reduction ingredient.

The ingredient is clean-label, all-natural and rich in umami flavour compounds. It helps enhance individual flavour notes and contributes to an overall savoury flavour profile with a significant reduction of salt. The company is claiming 25–35% sodium reduction across a variety of vegan and vegetarian products. Vegan hamburgers, vegetarian ‘chicken’ nuggets, seitan-based products and frankfurter-style sausages all exhibited positive results in taste and texture.

Dual-purpose scour pad

3M Commercial Solutions Division has introduced the Scotch-Brite Dual Purpose Scour Pad 96HEX, a double-duty scouring pad featuring a yellow side with the latest in scouring technology and a grey side that polishes away fine particles and grease.

The scouring pad is designed for medium-duty general-purpose cleaning, including aluminum pots and pans, cooking appliances, utensils and kitchen and maintenance equipment.

The scourer’s main innovation is in the power dots on the yellow side. The surface pattern of the power dots has been engineered to quickly and effectively cut through stubborn, baked- or burnt-on food. It’s also designed to be more durable and retain its scouring power through repeated uses. The yellow side has a special treatment that prevents particles of food from getting trapped on the web, allowing them to be rinsed away easily. The smooth grey side scours away fine food particles and leaves a shiny surface.

The hexagon design of the pad is ergonomic and functional, featuring two more edges than the traditional rectangle shape to provide more corners to get in and clean the hard-to-reach areas of pots and pans. The hexagon shape fits comfortably in the hand, maximising productivity and minimising user fatigue.

3M Commercial Services Div-Cleaning & Workplace Safety
www.3m.com/au/facilities

Vegan pizza range

Pizza Capers has unveiled its first ever vegan range. Following increased customer interest for vegan products, the chain has creating options that contain no dairy, egg, meat or animal products, including a Sweet Potato Vegan Lovers Pizza and an assortment of calzones such as Garlic and Fresh Rosemary, Classic Garlic and Sweet Chilli.

The company has also introduced an option for vegan cheese as a customisable topping for the whole pizza range, which additionally caters to lactose-sensitive clients.

Pizza Capers
www.pizzacapers.com.au
Swedish Culinary Team partners with Baltic cruise company

Gastronomic delicacies and high-quality food are an important part of the travel experiences offered by Finnish cruise company Viking Line. A variety of theme weeks have added flavour, along with celebrity chef partnerships and new onboard restaurant experiences.

Recently, a long-term partnership was launched with the Swedish Culinary Team, which competes in cooking competitions around the world. The partnership aims to develop taste experiences on the company’s seven vessels, which cruise between Finland, the Aland Islands, Sweden and Estonia. The Swedish Culinary Team will create brand new food concepts, provide restaurant and kitchen staff with continuing training and make guest appearances onboard.

Altogether there are nearly 40 restaurants and cafes onboard Viking Line’s vessels, offering everything from traditional buffets and homemade pastries to seafood platters, fine dining options and innovative tasting menus. The Swedish Culinary Team comprises 12 chefs and pastry chefs who, under the direction of team captain Fredrik Andersson, have successfully represented Sweden in international culinary competitions. Next in their sights are the Culinary World Cup 2018 and the Culinary Olympics 2020.

“We are very proud to launch a gastronomic partnership with Viking Line. The kitchen staff members on the vessels are really knowledgeable, and it is great to be able to start developing taste experiences on the Baltic Sea in partnership with them,” said Andersson.
Delivery-only kitchens are coming

Deliveroo has launched Deliveroo Editions, a platform that will enable hundreds of restaurants to reach customers in cities around the world, without needing a high street premise. The first Deliveroo Edition will launch in Australia later in 2017.

The rollout will see Deliveroo provide restaurant partners with the infrastructure — including bespoke kitchens, local marketing support and fleets of riders — that allows them to launch delivery-only menus catered to local tastes.

Using its own technology, Deliveroo can identify specific local cuisines missing in an area, identify customer demand for that missing cuisine and hand-pick restaurant brands that are most likely to appeal to customers in that area.

Deliveroo Editions will give restaurateurs the chance to launch, expand and test new innovations with delivery-only offerings.

The international rollout comes after successful trials in the United Kingdom with leading restaurants, new food start-ups and Michelin-starred restaurateurs. The trial resulted in thousands more deliveries for local riders as well as work for over 100 full-time restaurant employees. Deliveroo Editions will also mean consumers who want access to food from restaurants that have yet to open in their area will be able to access their menus to enjoy at home — cooked by chefs employed and trained by the restaurants themselves.

Shadowboard station

Foodcare offers a range of high-quality shadowboard stations to accompany its cleaning equipment. The AUK Ident-Panel 5S system, for example, is designed to handle any food processing situation.

By creating visual accountability and easy storage, it is possible to end the cycle of lost and misplaced cleaning equipment. Having a cleaning station that clearly identifies missing tools helps ensure that equipment is available when it is needed. Full colour coding prevents cross-contamination and improves allergen control, while additional instructions printed on the board itself remove the need for a multitude of paper signs.

Fully customisable, either mobile or wall fixed, the product is designed and made for the food industry.

Foodcare Systems
www.foodcaresystems.com.au

Mobile kitchen trailers

Refrigerated Transport Hire supplies mobile trailer kitchens for any sized event. The kitchens are available for a minimum two-day hire through to longer-term (multi-year) if required. Trailers come in single-, dual- and tri-axle configurations and are fitted with electric brakes, 240 V single-phase power, entry stairs, lighting and stainless steel shelving.

The standard fit-out includes: serving windows, food preparation areas, cooktop, oven, microwave, sink, refrigeration and freezer, ice-maker, dishwasher, hot and cold bain-marie, as well as hot and cold water storage. Additional features include a handwash dispenser, first aid kit, fire extinguisher, fire blanket. The kitchens are air conditioned, providing a comfortable kitchen environment in any location.

A range of optional add-ons is available to meet the needs of any food-related business. The range includes: coffee machine, rotisserie, pizza oven, ice-cream maker or hot dog stand.

Refrigerated Transport Hire Vic Pty Ltd
www.refrigeratedtransporthire.com.au
CAULIPOWER launches gluten-free pizzas

A US company has entered the gluten-free market with a line of ready-to-cook, cauliflower-crust pizzas. With the catchy name of CAULIPOWER, the pizzas are made with real cauliflower and said to be nutrient-rich and gluten-free, with less sodium and sugar, and fewer kilojoules than many conventional and gluten-free frozen pizzas. The pizzas are available in four varieties: Three-Cheese, Veggie, Margherita and plain crust.

CAULIPOWER is the brainchild of Gail Becker, who made the jump from a globally recognised corporate career to the world of entrepreneurship. After both her sons were diagnosed with coeliac disease, she was frustrated by the poor nutritional value of today’s gluten-free options.

“I knew there was a large segment of the population that want to eat healthier but may not have the time or resources to make those foods from scratch. My vision for CAULIPOWER is to advocate for accessible nutrition that’s easy and even a bit unexpected. The ultimate hope is for the products to help nourish today’s children so that they can become healthy adults who contribute to a sustainable and better world,” said Becker.

CAULIPOWER supports OneSun, a fund creating edible gardens at underserved schools to educate children on where their food comes from, combat obesity and inspire a new generation to love and harvest vegetables.
Australian Dietary Guidelines recommend that adult women eat five serves of vegetables/day and adult men 5.5 serves — all very good. But how do you get adults to eat their veggies?

You can go down the disguise path — puree the vegetables and hide them in more popular food or incorporate them in juices — but this is not a long-term solution and does not help adults to overcome their vegetable aversions.

At the University of Illinois researchers are investigating whether ginger, curry, rosemary, garlic or other herbs and spices can encourage adults to routinely consume more vegetables. A significant advantage of this approach is that herbs and spices do not add sodium or fat to the products — just flavour for increased palatability.

In their study, the researchers collected information on what spices and herbs consumers like, how frequently they use them, whether they are used when cooking vegetables, and whether the participants feel proficient in cooking with spices and herbs. Participants were given a list of 20 spices and herbs to choose from.

Younger respondents in the survey (18–29 years) and those who identified as Asian/Pacific Islander or other used 19 of the 20 spices and herbs more frequently than their older and white/Caucasian, African-American or Hispanic counterparts. Women were more likely to use spices and herbs when cooking at home. Women and individuals aged 18–49 felt more confident in their ability to cook with spices and herbs, while those who identified as white/Caucasian or those with an annual income below $50,000 exhibited less confidence.

The data revealed that age and cultural differences were linked to which of the 20 spices people were more inclined to like or use. For example, older participants were less inclined to like and use bolder spices and herbs like cayenne pepper or coriander and tended to stick to milder flavours such as paprika or garlic.

As part of the study, Nikolaus created a chart categorising which spices were most well liked, less well liked and least well liked, based on the demographic subpopulations that participated in the study.

As part of a larger team, the researchers are now collecting data in an actual dining setting, observing diners’ consumption of vegetables when spices or herbs have been added. They want to see if diners choose the vegetables that have been cooked with spices and herbs, and if fewer of those vegetables go to waste.

Such information would be useful in Australia when ready meal manufacturers want to increase vegetable consumption — especially in the low-income, male, older than 50 years and white/Caucasian respondents target demographics.

‘Spice and herb use with vegetables: Liking, frequency, and self-efficacy among U.S. adults’ has been published in the American Journal of Health Behavior. Co-authors include Cassandra J Nikolaus, Brenna Ellison, Pamela A Heinrichs, Sharon M Nickols-Richardson and Karen M Chapman-Novakofski, all of the University of Illinois.

This research was supported by a grant from the McCormick Science Institute.
Fuel savings for refrigerated delivery trucks

A new technology captures waste energy from refrigerated food delivery trucks as they slow down and then uses it to power secondary systems, such as air conditioning or refrigeration units, when the vehicles are stopped and idling. The system, developed by researchers at the University of Waterloo, could reduce emissions and save companies and governments millions of dollars per year in fuel costs.

“An idling vehicle essentially operates at 5% efficiency, meaning the vast majority of the fuel a bus or delivery truck uses when it is stopped is being wasted,” said Amir Khajepour, a professor of mechanical and mechatronics engineering at Waterloo and the study’s lead author. “By harnessing the energy a vehicle wastes as it is slowing down and redirecting it to a secondary battery system, these vehicles can be turned off without shutting off systems such as refrigeration and air-conditioning units.

As part of the study, researchers examined the various driving, braking and idling patterns of service vehicles. Using computer models and engines hooked up to secondary battery systems in their lab, they then simulated the routes service vehicles followed to determine how best to collect and use waste energy.

The research focused on service vehicles because, unlike passenger vehicles, they have significant auxiliary power needs for systems like refrigeration, which account for a significant portion of the vehicles’ total fuel consumption.

“Given that most companies or governments cannot afford to transition their entire fleets over to cleaner vehicles all at once, this system could represent a cost-effective way to make current vehicles more fuel efficient in the short term,” said Khajepour.

The money saved from fuel savings has the potential to pay for the new secondary power system in one to two years, he said.

The Canadian study has been published in Energy.
Childcare meals often not up to standard

What children are fed in childcare centres can influence their eating habits for life, so it is imperative that the foods and beverages served deliver the best possible nutritional messages.

However, it seems that many childcare staff either do not have a sound understanding of what is appropriate for a healthy eating environment or feel they are unable to change menus because of their centre’s food culture. Currently, the National Quality Standards (NQS) regulate childcare services to provide food consistent with the Australian Dietary Guidelines (ADG), and state “sound menu planning incorporates foods from the basic food groups in each meal and does not include discretionary choices.”

Recognising the importance of sound menu planning for childcare centres, researchers at Edith Cowan University established Supporting Nutrition for Australian Childcare (SNAC), an online nutrition education resource. Childcare staff were invited to register on the website, access resources and engage with other members on discussion boards.

Qualitative investigation of the attitudes and perceptions about healthy eating expressed by childcare staff on the SNAC site indicates that Australian childcare services are not meeting recommendations for provision of the core food groups and discretionary foods are offered routinely.

Concerningly, childcare staff revealed confusion and misunderstanding about which foods were ‘junk’ with discretionary foods such as sausages, processed meats and store-bought baked treats regularly being included in meal plans.

The research, by Ruth Wallace, Leesa Costello and Amanda Devine from the Edith Cowan University school of Medical and Health Sciences, has been published in the *Australian and New Zealand Journal of Public Health.*
No longer pie in the sky, robotic kitchen assistants are now a reality.

Miso Robotics and Cali Group have released Flippy, an artificial intelligence-driven robot that will work alongside kitchen staff at CaliBurger restaurants. The robotic kitchen assistant will be used to flip burgers and place them onto buns.

Debuting at CaliBurger in Pasadena, the robot will roll out through 2018 and is expected to be in more than 50 CaliBurger restaurants worldwide by the end of 2019.

Miso Robotics is pioneering the use of computer vision and deep learning software to bring low-cost, adaptable robotics into restaurants. The company’s collaborative kitchen assistant handles the hazardous, tedious and time-sensitive aspects of grilling and cooks burgers to perfection every time. It easily integrates into CaliBurger’s current kitchen layout without needing to reconfigure existing equipment.

While artificial intelligence is being successfully tested and employed to drive cars, manage the home and message with customers, Miso Robotics is the first company to bring robotics and AI into the kitchen in a meaningful way.

“Much like self-driving vehicles, our system continuously learns from its experiences to improve over time,” said David Zito, CEO of Miso Robotics. “Though we are starting with the relatively ‘simple’ task of cooking burgers, our proprietary AI software allows our kitchen assistants to be adaptable and therefore can be trained to help with almost any dull, dirty or dangerous task in a commercial kitchen — whether it’s frying chicken, cutting vegetables or final plating.”

“The application of artificial intelligence to robotic systems that work next to our employees in CaliBurger restaurants will allow us to make food faster, safer and with fewer errors,” said John Miller, chairman of Cali Group. “Our investment in Miso Robotics is part of our broader vision for creating a unified operating system that will control all aspects of a restaurant from in-store interactive gaming entertainment to automated ordering and cooking processes, ‘intelligent’ food delivery and real-time detection of operating errors and pathogens.”

The integration of Miso Robotics into CaliBurger’s kitchens will allow the chain to redeploy some of its staff to the dining room to engage more with customers. CaliBurger will also collaborate with Miso Robotics to retrain certain staff to operate Flippy.
Where Listeria can hide

You can wash all you like but you can’t get rid of all of the foodborne pathogens on your lettuce leaves because some hide within the plant tissue.

Conventional post-harvest sanitisation practices might not be sufficient to kill the potentially lethal pathogen because, according to a Purdue University study, *Listeria monocytogenes* can live inside the tissue of romaine lettuce.

Amanda Deering, clinical assistant professor in the Department of Food Science, and her team have established that the bacteria can live within lettuce in every stage of the plant growth process.

When ingested, *L. monocytogenes* can be deadly to those with vulnerable immune systems, including pregnant women, the elderly, infants or those with HIV. *L. monocytogenes* can also cross the placental barrier in pregnant women, triggering a miscarriage.

*L. monocytogenes* is killed by heat but this kill-step is not possible with minimally processed produce that is consumed raw. In 2011 31 people in the US died from listeriosis after the outside of raw rockmelons was contaminated with *L. monocytogenes*.

Their research showed *L. monocytogenes* can persist up to 60 days or until the time of harvest in romaine lettuce. They are now working on detection technologies as they shift their focus to what can happen to the seed and seedlings before planting. They aim to find pre-harvest control strategies to prevent produce contamination, particularly as sanitisers can only treat produce externally.
‘Health halo’ foods not so healthy

Parents choosing foods for their children are significantly more likely to purchase ‘health halo’ products — branded to cause misleading assumptions of good nutritional value — when they only view package images and don’t examine nutritional labels, according to new research by a Northwell Health paediatrician Dr Ruth Milanaik, DO.

Dr Milanaik, Director of the Neonatal Neurodevelopmental Follow Up Program at Cohen Children’s Medical Centre in New Hyde Park, concentrated her studies on factors affecting children’s food choices, including those parents made on their behalf and those depicted on popular children’s television shows.

Her study, ‘Defeating the Health Halo: Parental Food Choices for Grade-School Children’, asked 1013 parents to choose from pairs of food products in which one health halo item was matched with a more obviously unhealthy item with a similar nutritional label. These included pairings of Naked Smoothie vs Coke; Oat Bites vs Lucky Charms; and Cliff Bar vs Peppermint Patty, among others.

When given the package image and nutritional label of the same products side by side, nearly three-quarters of the parents started to question whether healthy food could be inferred from packaging alone. More than 77% indicated they should look at nutritional labels more carefully in the future.

“Just because we believe from packaging and marketing that a product is healthy doesn’t mean it really is,” Dr Milanaik said.

“We have to look at nutritional labels and avoid products that have what we call the health halo around them. It was a big wake-up for me as a parent of a diabetic, but also as a parent, period, to see some products I thought were intrinsically healthy not be any healthier than candy.”

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Contact Us to Learn More.
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E: info@cellbiosciences.com.au
www.cellbiosciences.com.au

The Growing Cell Biosciences family:
**Why you eat what you eat**

Understanding the role genes play in eating habits and food choices could lead to personalised diets that are easier to follow. Researchers found that variations in certain genes play a significant role in a person's food preferences.

Silvia Berciano, a predoctoral fellow at the Universidad Autonoma de Madrid, presented the new findings at the recent American Society for Nutrition Scientific Sessions, held in Chicago.

For the study, researchers analysed the genetics of 818 men and women of European ancestry and gathered information about their diet using a questionnaire. The researchers found that the genes they studied did play a significant role in a person's food choices and dietary habits. For example, higher chocolate intake and a larger waist size was associated with certain forms of the oxytocin receptor gene, and an obesity-associated gene played a role in vegetable and fibre intake. They also observed that certain genes were involved in salt and fat intake.

The new findings could be used to inform precision-medicine approaches that help minimise a person's risk for common diseases — such as diabetes, cardiovascular disease and cancer — by tailoring diet-based prevention and therapy to the specific needs of an individual.

"The knowledge gained through our study will pave the way to better understanding of eating behaviour and facilitate the design of personalised dietary advice that will be more amenable to the individual, resulting in better compliance and more successful outcomes," said Berciano.

The researchers plan to perform similar investigations in other groups of people with different characteristics and ethnicities to better understand the applicability and potential impact of these findings. They also want to investigate whether the identified genetic variants associated with food intake are linked to increased risks for disease or health problems.

"Most people have a hard time modifying their dietary habits, even if they know it is in their best interest," said Berciano. "This is because our food preferences and ability to work toward goals or follow plans affect what we eat and our ability to stick with diet changes. Ours is the first study describing how brain genes affect food intake and dietary preferences in a group of healthy people."

Although previous research has identified genes involved with behaviours seen in eating disorders such as anorexia or bulimia, little is known about how natural variation in these genes could affect eating behaviours in healthy people. Gene variation is a result of subtle DNA differences among individuals that make each person unique.

The new research could lead to new strategies to empower people to enjoy and stick to their optimal diets.

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**Sodium-reduced flavour enhancer**

Salt of the Earth has collaborated with meat companies to meet sodium-reduction regulations in several types of meat products. Mediterranean Umami, a clean-label ingredient, lowers sodium by 25–33% or more in processed meats.

Salt is widely used in meat processing as a flavour enhancer and as a functional ingredient. Most processed meat products contain 1–3% salt, and many also use monosodium glutamate (MSG), yeast extracts, hydrolysed vegetable proteins (HVP), nucleotides, etc, as flavour enhancers. While effective, most of them — especially MSG — have a negative consumer connotation.

Development work has demonstrated that a 25–33% reduction in sodium can be achieved across a variety of meat products, including frankfurters, sausages and injected chicken pastrami. In addition, Mediterranean Umami was able to eliminate the use of MSG and/or yeast extracts in meat products while keeping the desired texture.

Mediterranean Umami is a blend of vegetable concentrates and extracts, plus natural sea salt rich in umami flavour compounds. It helps enhance flavor and contributes to an overall savoury flavor profile, giving products a more desirable taste as well as reducing the use of salt.

Salt of the Earth
www.saltoftheearthltd.com
Consumers confused by ‘healthy’ labelling

The ongoing debate over healthy food labelling has been once again put under the spotlight as a US study finds terms such as no-fat, no-sugar, low-fat and reduced-salt and food packaging rarely reflect the actual nutritional quality of the food.

The results of the study, led by researchers at the University of North Carolina at Chapel Hill, have been published in the *Journal of the Academy of Nutrition and Dietetics.*

"In many cases, foods containing low-sugar, low-fat or low-salt claims had a worse nutritional profile than those without claims," explained lead investigator Lindsey Smith Taillie, a research assistant professor in the department of nutrition at UNC’s Gillings School of Global Public Health. "In fact, in some cases, products that tend to be high in calories, sodium, sugar or fat may be more likely to have low- or no-content claims."

For example, a three-biscuit serving of reduced-fat Oreos contains 4.5 g of fat, compared to 7 g in a serving of full-fat Oreos — but both still contain 14 g of sugar per serving. Low-fat chocolate milk has a lower fat content but it is higher in sugar relative to plain milk and higher in sugar and fat relative to other beverages.

Consumers trying to make healthy choices may assume that a food or drink with a ‘reduced’ claim is a healthier product. But that product only has to be reduced in reference to the original food of the same product for that specific nutrient — a reduced-fat biscuit, for example. That biscuit could also contain higher sugar or sodium, so if consumers are only relying on the reduced claim, they could potentially end up with a less healthy biscuit.

After examining more than 80 million food and beverage purchases from more than 40,000 households from 2008 to 2012, Taillie and her colleagues at the UNC-Duke USDA Center for Behavioral Economics and Healthy Food Choice Research found that 13% of food and 35% of beverage purchases had a low-content claim (including no, free, low or reduced) and that low-fat was the most common claim, followed by low-calorie, low-sugar and low-sodium.
About 60% of foodborne disease outbreaks are linked to commercial caterers and eating establishments. Even though a large proportion of foodborne illness are avoidable, we are in a very risky business unless we can ensure food safety practices are followed. Infected food handlers are responsible for about 12% of all foodborne disease outbreaks.

A recent study in the UK focused on poor food safety practices in kitchens. It looked at rates of Food Risk Increasing Behaviours (FRIBs) among the public and professional chefs in order to more accurately reveal rates of illicit behaviours. The study’s objectives were to:
1. Determine the prevalence of FRIBs amongst working chefs, catering students and the public.
2. Investigate whether food malpractices are correlated with observable characteristics among the general public (gender, age, attitudes to risk, etc).
3. Investigate whether food malpractices are more likely in certain types of commercial establishments (food safety score, price band, awards won) and correlated with observable characteristics of chefs and
4. Explore the implications of the prevalence of poor practices for food hygiene and human health.

Knowing that food handling behaviours can create or worsen food safety hazards, four behavioural statements were presented to chefs and catering students:
5. I always wash my hands immediately after handling raw meat, poultry or fish.
6. I have worked in a kitchen within 48 hours of suffering from diarrhoea and/or vomiting.
7. I have worked in a kitchen where meat that is ‘on the turn’ has been served.
8. I have served chicken at a barbecue when I wasn’t totally sure that it was fully cooked.

Behaviours 1 and 2 relate to food hygiene basics and should feature every business’s HACCP. These behaviours have the potential to contaminate food with bacteria and represent two extremes of HACCP failing. The need for good hand hygiene is likely to be the most commonly communicated food hygiene message and should therefore be simple and accessible to respondents. Working within 48 hours of suffering from diarrhoea and/or vomiting contravenes UK regulations which state that “managers must exclude staff with these symptoms from working with or around open food, normally for 48 hours from when symptoms stop naturally”.

Behaviours 2 and 3 were of interest because these are unlikely to be identified by direct observation of kitchen behaviours or an inspection. Behaviour 2 was also selected as it was identified as a significant issue in one of the highest profile outbreaks of food poisoning in recent years in the UK, in which over 400 diners fell ill after eating at the Michelin-starred restaurant ‘The Fat Duck’ and has been identified as a factor in other outbreaks.

Behaviour 3 relates to serving meat that is spoiling and is a previously unexplored behaviour suspected of being practised in some catering establishments which has potential implications for foodborne illness.

Behaviour 4 was selected for investigation because undercooked chicken and barbecued meat are known risk factors for campylobacteriosis, the most commonly reported gastrointestinal bacterial pathogen in humans in the EU since 2005.

The study employed a randomised response protocol that ensured respondent privacy and protected the interviewer from being aware of potential malpractice. The technique allowed the prevalence of true bad behaviours in the sample to be estimated but precluded determination of any individual’s behaviour.

Four target groups were identified for sampling: chefs, catering students with restaurant experience, catering students without restaurant experience and the public. Each group was asked a set of additional questions on characteristics which may help to explain their food hygiene behaviours. For chefs and working students these included questions on: kitchen position, the type of restaurant they work in, average price of a main meal, food hygiene rating score and whether their kitchen had won awards or accolades. Members of the public were asked about their experience of food poisoning, their level of concern about food poisoning and their cooking role at home. Demographic information (age, gender, education level etc) was collected from all respondents.

The results indicate that, inter alia, the probability of serving meat on the turn was 11% higher for those with a university education. University graduates were also more likely to have worked within 48 hours of experiencing diarrhoea and vomiting, as were those who believed they were more at risk of food poisoning than the average person.

The proportion of chefs and catering students not handwashing immediately after handling raw meat, poultry or fish was about half that of the public sample, at 7.4%.

The rates of serving of food within 48 hours of an episode of diarrhoea and vomiting were similar for the public and professionals at about 30%. In the UK such behaviour contravenes Food Hygiene Regulations, which state that: “No person suffering from, or being a carrier of a disease likely to be transmitted through food or afflicted, for example, with infected wounds, skin infections, sores or diarrhoea is to be permitted to handle food or enter any food-handling area in any capacity if there is any likelihood of direct or indirect contamination.” Managers are required to

About 60% of foodborne disease outbreaks are linked to commercial caterers and eating establishments.
exclude staff with symptoms such as diarrhoea and vomiting from working with or around open food, normally for 48 hours from when symptoms stop naturally.

A high proportion of chefs and students admitting to having worked in a kitchen where meat ‘on the turn’ has been served is also of concern for public health. There are no comparative rates of this behaviour in other studies, although the practice is a long-established means of reducing costs in restaurants.

The rate of serving chicken at barbecues when unsure it was fully cooked was higher among the chefs and catering students than the public (16% versus 13%), contrary to the expectation that the professionally trained would be less prone to this behaviour.

This study suggests that behaviours that may be important risk factors for foodborne disease are widely prevalent and likely to be missed by direct observation studies and restaurant inspections. There are likely to be varied and multiple causal factors behind the behaviours.

Such risk increasing behaviour is not solely confined to ‘low-end’ restaurants.

Lack of time, staff and resources are consistently identified as barriers to compliance with safe food procedures such as handwashing. There is a clear economic imperative to serve meat ‘on the turn’ and existing behavioural norms within commercial kitchens will affect new members of staff employed within them. The motives leading to workers opting to return to work while still posing risk of transmission after illness is multifaceted. Ignorance, the economic losses associated with not working, fear of losing one’s job and the desire not to let down colleagues (or the family business) are all possible causes of the behaviour.

The research, published in journal PLOS ONE, found that avoiding eating where such behaviours take place is not easy for the public, because chefs working in award-winning kitchens were more likely to have returned to work within 48 hours of suffering from diarrhoea and vomiting, and not washing hands was more likely in upmarket establishments — despite over a third of the public agreeing that the more expensive a meal was, the safer they would expect it to be.

Chefs working in restaurants with a good Food Hygiene Rating Scheme score were just as likely to have committed the risky behaviours at some time in their career or to have worked with others who had.

The full paper, entitled ‘Estimating the prevalence of food risk increasing behaviours in UK kitchens’, is well worth a read and can be found here.

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Getting hidden sugars out of the closet

A recently released report from CHOICE finds that if consumers could identify added sugars on food packs they could avoid 26 teaspoons of sugar each day and up to 38.3 kilograms a year. "Leading national and international health advice is clear — people should be reducing consumption of added sugars. But right now it’s nearly impossible to identify what products are laden with added sugar,” CHOICE Campaigns and Policy Adviser Katinka Day said. “It’s time added sugars were clearly labelled on processed food products so consumers can make more informed choices with their daily diet.”

CHOICE found that savoury processed foods and products claiming to be healthy are some of the worst offenders when it comes to added sugar. “Although McCain’s Healthy Choice Apricot Chicken presents as a healthy option, it contains more than six teaspoons of sugar, most of which is added sugar,” Day said. “Kellogg’s Nutri-Grain spruiks its credentials as an athletes’ breakfast, yet one small serve contains over 2.7 teaspoons of sugar — almost all of this is added sugar.

“With over 27 million 290-gram boxes of Nutri-Grain sold in 2014 alone, each laden with 77.43 grams of added sugar, Kellogg’s is serving up our little iron men a staggering 2.12 million kilograms of sugar each year.” CHOICE found that swapping Nutri-Grain to Uncle Toby’s Weeties for breakfast will save you 2.7 teaspoons of added sugar each day.

Flavoured yoghurts are also products to watch. Switching from Gippsland’s Raspberry and Coconut Yoghurt to Gippsland’s Organic Natural Yoghurt and adding your own raspberries and coconut can save you 3.8 teaspoons of added sugar.

“At the moment you have to be a food scientist to identify added sugars in processed foods. Consumers in Australia have no clear way of knowing how much sugar has been added to a food.

“That’s why we want food and health ministers to take action and require added sugars to be clearly labelled on food products,” Day said. “The fact is it’s all but impossible for the average shopper to make an informed choice about added sugar in their diet.”
Can hydroponics be organic?

There is growing (excuse the pun) controversy in the US as to whether or not hydroponically, aeroponically or aquaponically grown produce can be labelled as “organic”. In Australia the Department of Agriculture and Water Resources’ National Standard for Organic and Bio-Dynamic Produce states that “organic crops” must be grown in soil. Most other countries, including the 28 countries in the European Union, Mexico, Japan and Canada, also prohibit the organic certification of produce grown through hydroponics.

But in the US this is not the case. Its National Organic Standards Board is meeting to decide whether it should be a requirement for organic crops to be grown in soil following an official legal complaint filed by the Cornucopia Institute alleging that the USDA has been illegally allowing hydroponically grown fruits and vegetables to be labelled and sold as organic.

With the global organic food market expected to grow at a CAGR of more than 14% from 2016 to 2021 (TechSci Research) and not enough organic produce around to meet demand, this controversy is not merely semantics but has pretty strong financial impetus. It will be interesting to see the outcome.
Vanilla friand mix

Edlyn has launched its Vanilla Friand Mix. The product is gluten-free and packaged in a 2 kg container that is easy to use and store. It is made in Australia.

Simply combine the friand mix with butter and water to create dense and moist dessert cakes. The mix can also be combined with ingredients such as blueberries, raspberries or cocoa to create different flavours.

Edlyn Foods Pty Ltd
www.edlyn.com.au

Food safety test equipment

Arrow Scientific offers a wide range of smart tools to effectively manage food microbiology and monitor HACCP systems to ensure food safety.

Equipment to monitor critical control points includes thermometers, data loggers, pH meters and test strips for a range of parameters and textures.

Products and consumable items to conduct in-house microbiological testing are also available, such as prepared media, sterile bags, dehydrated plates, pipettes and incubators.

Hygiene controls for factories can be monitored by Arrow Scientific’s protein residue swabs and ATP systems. A broad range of swabs for microbiology testing are available to suit the needs of any swabbing program, including sponge swabs for large areas.

The AgraStrip Allergen Test Strips are designed to conduct fast and easy on-site analysis of allergens in foods and on surfaces. For facilities with a laboratory, the AgraQuant ELISA test kits are available for quantitative results.

Arrow Scientific
www.arrowscientific.com.au

Pack and seal systems for ready meals

Confoil’s Pack and Seal systems are designed for busy kitchens and are suited to aged-care and Meals on Wheels organisations. Comprising custom packaging, lidding and machinery solutions, options can be tailored specifically to kitchen layouts, staff ratios, cooking methods and the packaging requirements of the consumer.

Meals are packed into aesthetically pleasing paperboard or pulp trays which act as a natural insulator, so the packaged meals are pleasant to handle after heating. The trays are never brittle and can withstand temperatures of -40 to 210°C.

Importantly, the transparent heat sealable lids allow the meal to be viewed, and the generous film overhang allows for simple removal of the lidding.

Packaging options within the range are varied, from large and smaller portion single-serve meal sizes, to pulp containers with 2 or 3 separate compartments. Dessert and soup specific packaging styles are also available. Many of the trays can also be custom printed with company logos, corporate colours or messages.

To complete the system, a choice of cost-effective heat sealing machinery is available, from ergonomic benchtop sealers to inline automatic models.

Confoil Pty Ltd
www.confoil.com.au
Piping bag

Ferrero Foodservice has launched a 1 kg piping bag of its Nutella product, designed specifically for the foodservice market.

The piping bag allows bakers and chefs to pipe easily, without first spooning product into the bag, and was developed to improve kitchen efficiency. Chefs and bakers can simply snip and start piping, saving valuable time and eliminating mess.

The foodservice-specific piping bags are available now from foodservice wholesalers.

Ferrero Foodservice
www.ferrerofoodservice.com

Floretting and coring equipment

AIT is a manufacturer of high-quality processing machinery within the broccoli, cauliflower, cabbage and lettuce industries. The company’s Decorex and Silex model floretting and coring equipment features technology which ‘reads’ each head as it enters the cut zone, ensuring the process gives optimum cut results, reduces waste and saves labour costs.

Each lane is capable of processing up to 3600 heads/h. Multiple lanes are available, as are mixed-use machines to process broccoli and cauliflower, cabbage and lettuce, or any mix that is required in each plant.

Summit Machinery Services
www.summitms.com.au

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Packaging film for microwave steam cooking

KM Packaging Services’ K Steam range of packaging film is claimed will not only increase the shelf life of fresh produce but also reduce the in-pack cooking time.

The film enables pressure to build within the tray during cooking, ensuring shorter cooking times combined with retention of flavour, moisture, texture and nutritional content. K Steam is particularly suited to microwave steam cooking of fresh vegetables, fish and seafood.

K Steam allows fresh vegetables to ‘breathe’ for longer through the processes of packaging, distribution and retail, ensuring longer shelf life and increased freshness.

The film can be supplied as peel seal or weld seal, with or without KM’s anti-fog treatments such as KM Klarity+. The films feature easy-peel opening following cooking while remaining secure during distribution and retail.

KM Packaging Services Ltd
www.kmpackaging.com

Cook chill bags

Pac Food’s Cook Chill bags are specially designed high-gauge bags with an extra barrier to be able to extend the shelf life of wet dishes. The most susceptible part of cook chill bags is the seal, which is tubular with two seals on the bottom and 115 micron thick.

The basics of the cook chill method are to: hot fill Cook Chill Bags (up to 95°C) with wet dishes (soups, sauces etc) by hand scooping; pump filling or vertical form filling; seal the bags (using a clip seal or heat seal); chill the bags and content using an ice bath, blast chiller or tumble chiller; store the bags in a cold room, the most suitable temperature is 0–2°C then regenerate in a steam oven (up to 95°C) or boiling water.

The basic idea behind the product is that bacteria are brought through the food temperature danger zone very quickly to avoid growth, meaning a longer shelf life of wet dishes can be achieved.

The danger zone refers to the most dangerous temperature for foods, between 4 and 60°C. This range of temperature is dangerous because it’s below the temperature at which heat destroys bacteria (above 60°C), yet above the cooling range (below 4°C) where the growth of bacteria is slowed.

The Cook Chill bags offer economies of scale; soups and sauces can be made in larger volumes, ingredients purchased in bulk and kitchen maintenance is labour saving.

Pac Food Pty Ltd
www.pacfood.com.au

Foodservice sauce range

The McIlhenny Company’s TABASCO Sauce range is now available in 1.89 L foodservice packs.

The range is available in five flavours, including TABASCO Original Red Pepper Sauce, Chipotle Pepper Sauce, Green Pepper Sauce, Habanero Pepper Sauce and the latest Buffalo Style Sauce.

From seed to sauce, it takes up to three years to handcraft and ferment TABASCO Original Red Pepper Sauce. For more than 140 years TABASCO Sauce has been made in much the same way, ageing the mash for up to three years in white oak barrels with only two additional ingredients: vinegar and salt.

The kitchen-friendly 1.89 L plastic bottles have been released to make it easy to use the authentic sauces in back-of-house recipes.

TABASCO Sauce is halal certified, gluten-free, kosher, suitable for vegetarians and free from artificial colour and flavours.

Stuart Alexander & Co Pty Ltd
www.stuartalexander.com.au

Filler for cooked rices, pastas and meal components

The Multi-Fill MPFSC-120 filler can deposit products at speeds up to 120 containers/min depending on the product, fill volumes, container and line configuration. The fully automatic machine requires minimal monitoring by the operator.

Product is loaded into the hopper and a conveyor meters the product to the filling head. The conveyor belt is blue coloured and designed with special belt fingers or solid cleats, depending on the products filled.

The filler can be placed over a multiple lane production line to fill the same product into side-by-side containers and can be adapted with a distribution system.

It can also be placed over a vertical or horizontal bagging machine to fill into various pouch types such as flat and stand-up.

A batch feed hopper can be used for feeding the product in bulk.

HBM Packaging Technologies
www.hbm.com.au
Guideline-compliant monitoring of temperature and humidity in cool rooms

roof of cold chain compliance is part of the HACCP plans for many larger-scale ready meal manufacturers, but the days of popping into the cool room with a thermometer and a piece of paper are well and truly over.

In the business sector, the use of cloud solutions is now widespread. ‘Renting instead of buying’ is the motto these days when it comes to using software, in technical jargon also referred to as SaaS – software as a service. Cloud solutions allow ubiquitous data access from any terminal device without any prior installation of specific software. This saves time and makes processes more efficient — opting to use the cloud therefore also has an effect on a company’s economic profitability and competitiveness.

In addition to the increased availability of data, a cloud solution is also an opportunity to extensively automate labour-intensive and time-consuming processes. It’s not all that long ago (and in some companies still...
common practice) that data was collected manually using a simple thermometer and then documented on paper. The next stage of development was the installation of data loggers at critical measuring points, which at least automated the measurement — but without a network connection, these still had to be read out manually. For analysis and reporting, this data subsequently had to be read into proprietary software and was then also only accessible on this particular terminal device. Moreover, only an ex-post analysis of the readings was possible, so limit value violations were often detected when it was too late.

In the field of measuring technology, cloud applications are still relatively rare. Testo was one of the first suppliers on the market with its testo Saveris 2 measurement data monitoring system, which was launched in 2014, and the company has gained extensive experience.

The option of real-time monitoring was not possible until networked Wi-Fi data loggers were introduced. These automatically sent their data to a central location and could trigger an alarm if a limit value was violated. However, it was still necessary to install specific software, which needed to be maintained and regularly updated. As well as real-time alerts, comprehensive monitoring of all measuring points was now possible for the first time, though still only by certain terminal devices. Only when this networking concept was ported to the cloud was the data available everywhere — around the clock, anywhere in the world and using any terminal device. Rather than specific software, with testo Saveris 2 only a standard web browser is required to monitor and visualise the readings.

This development comes at just the right time, because given the fact that there are ever more legal stipulations and increasing quality management requirements, automated data acquisition, storage and analysis makes it possible to significantly improve efficiency during everyday work. The integrity of the data is ensured at all times and errors can be rectified quickly thanks to the customisable alerting options. The documentation requirements — for example, to prepare audits — are also considerably simpler.

Typical examples of this would be measuring the temperature and humidity of food in cool rooms. Manual readout of data loggers, previously a considerably demanding task in terms of both time and personnel, is completely automated with testo Saveris 2. Data from all measuring points is available directly via the Testo Cloud — not just on an office PC, but also on a smartphone or tablet, so the quality manager can take a look at the current situation from anywhere. If a set upper- or lower-limit value is exceeded, testo Saveris 2 immediately sends an alert via email or SMS so that measures can be taken promptly. Spoiled food products damaged by frost are therefore a thing of the past.

All defined specifications are observed, the cold chain remains unbroken, and proof of this can be supplied at any time with a simple click of the mouse.

The advantages of cloud-based measurement data monitoring are therefore evident — and if there are still any reservations about this solution, they are mostly related to the issue of data security. Strictly speaking, there are two separate issues here: one about preventing the loss of data and the other about protecting data from unauthorised access by third parties. With regard to both these aspects, the Testo Cloud offers high, state-of-the-art safety standards. The Testo Cloud is hosted at one of the world’s largest cloud providers (AWS), which is certified to national and international standards (eg, PCI DSS, ISO 27001 and 95/46/EC).

The provider itself has no access to the stored data; only the customer has this, similar to a safe deposit box in a bank. At the AWS server centres, the measurement data is stored in a high-availability cluster with mirrored, physically separate databases, so that even in the event of a fire, one data copy will still be available. Load balancing between different servers also guarantees a short access time (low latency) at high access rates.

In order to prevent potential loss of data in the event of connection problems, the readings remain stored locally in the data loggers until entry in the database has been confirmed. A temporary interruption to the WLAN connection therefore cannot result in any data gaps. Each logger stores up to 10,000 readings so that, with the usual measuring cycle of 15 minutes, the memory is only overwritten after more than 100 days. Furthermore, data export from the cloud to a local server is also possible at any time as required.

With the cloud solution, spot measurements and manual readout of data loggers will soon be a thing of the past, and personnel allocated to these tasks can be used elsewhere. The reporting system is also largely automated. However, the most important aspect is the advantage in terms of data availability and data security: all readings are available via the cloud at all times, and can be retrieved from anywhere and using any terminal device.

The testo Saveris 2 cloud solution therefore offers the ideal prerequisites for guideline-compliant monitoring of temperature and humidity, as well as significant efficiency gains as a result of automated processes.

Testo Pty Ltd
www.testo.com.au
Now mandatory to declare lupin on food labels

Lupin has been added to the list of allergens that must be declared on food labels. The Food Standards Code now requires lupin to be declared on labels whenever it is present as an ingredient or as a component of food additives or processing aids. This requirement must be met by 25 May next year.

Lupin flour was officially introduced as a food ingredient in Australia in 2001, with the first Australian cases of lupin allergy reported in 2004. Lupin allergens are resistant to normal cooking procedures, including boiling and microwave heating.

Lupin is high in protein (30–40%) and dietary fibre (30%) and low in fat (4–7%). It can be milled and ground into wholemeal-type flour to add protein and fibre to baked goods and noodles. The kernel can be ground into kibble-type products or milled into flour and lupin protein isolates can be added to products to improve their nutritional quality. Lupin is increasingly used as a protein replacement for genetically modified ingredients and for animal proteins such as milk and egg white.

Lupin use is increasing as it is being incorporated in an ever wider range of food products including bread, bakery and pasta products, sauces, beverages and meat-based products such as burgers and sausages. Lupin can also be included in gluten-free and soy-free products.

Lupin is a legume related to peanut and soybean and, like other high-protein foods like egg and shellfish, may trigger an allergic reaction in a small percentage of the population. As more and more people are exposed to lupin it is anticipated that lupin allergy incidence will increase.
Steam it — don’t boil it to reduce cyanotoxin contamination

Back in 1979, 138 inhabitants of Palm Island, Queensland, were admitted to hospital, suffering from gastroenteritis. The gastro outbreak was eventually traced back to a local water supply — a dam that had experienced a significant bloom of *Cylindrospermopsis raciborskii*, an algae that had been treated with copper sulfate. The copper sulfate had caused the freshwater cyanobacteria to lyse and release cylindrospermopsin (a cyanotoxin) — this toxin was responsible for the disease outbreak.

The highly water soluble compound, which is produced by several cyanobacteria species, bioaccumulates in fish and other aquatic plants and animals. However, little is known about the extent of exposure via food in humans.

According to a recently released study, steaming freshwater fish for more than two minutes reduces the presence of cylindrospermopsin by up to 26% while if boiled, the reduction is only 18%.

The Toxicology and Legal Medicine at the University of Seville study also concluded that the biotoxins pass into the water that has been used for cooking.

In the study, published in *Food Control*, it was also observed that the concentration of this cyanotoxin after cooking would not have consequences for public health, as establish by the Provisional Tolerable Daily Intake established by the WHO.

Cyanotoxins can be found in plant-based foods, which have been watered with water that contains them. The same is true of cereals, fish and shellfish that have been contaminated before becoming part of the food chain. It has been shown that this cyanotoxin, which is increasingly more common globally, can affect organs like the liver, kidneys, heart, intestines, lungs and brain, among others, in animals. In humans, the effects of ingestion include hepatocellular, headaches, diarrhoea, dehydration and kidney damage, among others.
The impact of compostable foodservice packaging

A literature review has found encouraging evidence about the impact of compostable foodservice packaging on waste and contamination. The review, by the Foodservice Packaging Institute, examined literature relating to the impact of compostable foodservice packaging at different points in the composting value chain. It found a growing body of evidence demonstrating that the use of compostable foodservice packaging can increase food scrap diversion and reduce contamination when used in conjunction with known best practices for food scraps collection. The study examined how compostable foodservice packaging impacts:

- composting program participation rates
- food scraps diversion rates
- contamination of composting feedstocks and finished compost
- the composting process, compared with traditional carbon sources.

"As the use of compostable packaging grows, so too should the opportunities to successfully recover those items," said FPI President Lynn Dyer. "When considering whether to accept foodservice packaging, composters may have questions about the impact on their programs, and this study helped to identify resources to answer those questions."

This is a new area of study and, as such, the availability of relevant sources varies widely by topic area. However, the available data suggests that compostable foodservice packaging use, in conjunction with programs such as outreach, education, new infrastructure and desired behaviour models, can increase food scrap diversion rates and reduce observed contamination rates.

In order to realise the full benefits of compostable packaging, coordinated efforts around customer education are essential between manufacturers, operators, consumers, municipalities, haulers and composters, the study found.

A crucial gap identified in the available research is the extent to which compostable foodservice packaging compares to natural carbon sources typically used during composting. No data was found comparing their ability to balance compost carbon to nitrogen ratios, moisture content, porosity, composting rate, ammonia volatilisation and final compost properties.

"This review will help inform our strategies, investments and activities to increase the recovery of compostable cups, take-out containers and utensils used by an increasing number of foodservice outlets," stated Dyer. "Information sharing and education among manufacturers, foodservice operators, consumers, municipalities, haulers and composters are critical to our collective success."

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BaxxAir Destroys Bacteria

BACTERIA: testing on air-borne pathogens found the Baxx to be up to 99.9% effective in removing all pathogens after 90 minutes.

VIRUSES: in controlled environments viral traces were reduced by 88.96% after 90 minutes.

TESTS INDICATE EFFECTIVE ELIMINATION OF THE FOLLOWING -
- ESCHERICHIA COLI (E COLI)
- STAPHYLOCOCCUS AUREUS
- LISTERIA MONOCYTOGENES
- PSEUDOMONAS and ASPERGILLUS NIGER
- CAMPYLOBACTER
- BACILLUS SUBILIS SPORE
- SALMONELLA
- SACCHAROMYCES CEREVISIAE
- MRSA, C.DIFF (spore form) and NOROVIRUS
Making portion downsizing commercially acceptable

Make something bigger and everyone hugely underestimates the increase; make something smaller and everyone notices — and if it’s food they are not happy.

Late last year Mondelez in the UK reduced the weight of its Toblerone bars — the 400 g bars were reduced to 360 g and the 170 g bars to 150 g. This size reduction was achieved by increasing the size of the gap between the triangles of chocolate so the pack dimensions were not changed. Even though Mondelez was up front about the change, quoting increasing ingredient prices as a driving factor, consumers were far from impressed. Complaints were rampant across social media and the mainstream global media outlets ran the story.

The message was very clear — consumers do not like downsizing.

What is somewhat surprising is how accurately consumers recognise and quantify downsizing, especially as they are much less able to recognise and quantify upsizing.

In a recent article, The accuracy of less: Natural bounds explain why quantity decreases are estimated more accurately than quantity increases, published in the Journal of Experimental Psychology: General, INSEAD Professor of Marketing Pierre Chandon and Naiya Ordabayeva, Assistant Professor of Marketing at Boston College, establish the ‘hows’ and ‘whys’ behind consumers’ reactions to downsizing.

They found that when a portion size is halved consumers estimate it to be 53% of its original size, but when portion size is doubled it is judged to be 172% larger rather than 200%.

Apparently this has a lot to do with ‘boundaries’ — when size is reduced zero is the final size possible — ie, there is a finite boundary, but with increases there is no finite boundary.

The researchers also found that consumers were less averse to size decreases when they were estimating the proportion decrease rather than the absolute size change.

As downsizing portions is, in many instances, going to result in healthier diets for consumers, it is important that this downsizing is presented in a way that is acceptable to consumers. It looks like Chandon and Ordabayeva have some insight into how this can be achieved.

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- Compact footprint

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3D stevia sweetener

Lampados International’s Liteez is a 3D stevia sweetener for hot drinks. The ‘free-from’ meringue kiss addresses the growing demand for sugar reduction in beverages.

The vegan meringue kiss is a completely plant-based treat. It is free from any allergens, such as eggs, gluten, lactose or nuts, and contains just six simple ingredients, including prebiotic fibres that build sweetness, act as a bulking agent and function as a nutraceutical.

The product uses a vegetable protein that has the ability to foam like eggs to help create the desired kiss texture and form. Sugar’s functionality is replaced with prebiotic fibres to form a stable foam and maintain the kiss shape, while being highly soluble in hot drinks such as coffee or tea. The sweetener can also be enjoyed as an ultralow-calorie sweet treat.

Lampados International Ltd.
liteezsweeteners.com
Plate 4 Plate initiative gives 15 million meals to those in need

For every burrito or bowl purchased at a Zambrero restaurant, a meal is donated to someone in need. Zambrero’s ‘Plate 4 Plate’ initiative has been built into the core of the business, ensuring the company is “giving back and making the world a better place”.

This is not a passing ‘feel good’ claim as Zambrero has announced it has donated over 15 million meals through the initiative so far and is on its way towards achieving its goal of donating a billion meals by 2025. The meals are made from rice, lentils and soy, and include 23 essential vitamins and nutrients. Communities receive these packs and then use what local ingredients are available to make meals, primarily via school feeding programs.

Zambrero works closely with hunger relief agencies to distribute the food to more than 74 countries, including Australia. Rise Against Hunger distributes the food globally while Foodbank Australia distributes meals locally.

Zambrero recently celebrated opening its 150th Australian restaurant. The franchise now has over 165 restaurants worldwide. Zambrero is holding its annual volunteer meal packing day, to pack meals for distribution working with its partners, on 20 October. It will take place across five metro cities in Australia. Visit http://plate4plate.zambrero.com/get-involved/ to find out more closer to the date.

Canola spread

Peerless FoodService has a range of spreads made in Australia to suit all catering needs. The Vitalite range of spreads has been specially formulated for easy spreading and contains no artificial colours and flavours. Made from monounsaturated canola oil, they all contain less than 1% salt and are available in a variety of convenient pack sizes: a 10kg bulk catering carton, 500g tubs and a 10g portion control pack suitable for accompanying bread or biscuits.

Peerless Holdings
www.peerlessfoods.com.au

Metal detectable disposable products

Rodburn is a supplier of metal detectable disposable products. Within the food processing and pharmaceutical, meat and dairy process industries, there is an ever-present danger of contamination from protective clothing and other articles accidentally breaking and entering the production line.

Undetected contaminants can result in costly product recalls, damage to equipment, harm to a company’s reputation or worse still, serious injury if the contamination is consumed. To reduce this risk, Rodburn recommends the use of Amarock metal detectable protection during the production process.

Amarock metal detectable hair nets and beard and sleeve covers are available in three colours, helping to prevent cross-contamination.

Rodburn
www.rodburn.com.au

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Rodburn
www.rodburn.com.au
Sales of specialty foods through foodservice in the US increased 13.7% to $27.7 billion between 2014 and 2016 as consumers make specialty foods and beverages a regular part of their away-from-home meal purchases.

Consumers — particularly Millennials, it seems — are willing to pay higher prices for specialty foods and often perceive them as having various health and wellness benefits compared to non-specialty foods.

The Specialty Food Association has released its annual State of the Industry report, which examines the vibrant $127 billion industry in detail. Largely fuelled by small business growth, total sales jumped 15% between 2014 and 2016.

“Consumer preferences for specialty food products are growing at double digits, outpacing mainstream food staples,” said Phil Kafarakis, president of the Specialty Food Association.

“Consumers are also making purchases wherever they happen to be, changing the retail food environment. The eagerness of all retailers — including mass market, e-commerce and foodservice — to capitalise on these consumer trends is transforming the marketplace. Our research indicates that accelerated growth will continue.”

Top trends identified in this year’s SFA research include:

• Sales growth. While growth at retail and foodservice have slowed — up only 5.5% versus 9.1% in 2015 — growth in third party e-commerce and direct-to-consumer websites have gained ground, accounting for almost 36% of sales.
• Retail channels heating up. Millennials — one of the top-growing consumer segments — buy specialty food wherever they shop. This trend has helped drive sales in multi-unit grocery and mass merchants, where growth outpaced that of natural or specialty chains for the first time.
• Centre store alive and well. Grocery, shelf-stable specialty foods accounted for 61% of the total specialty food market in 2016 ($36.2 billion). Strong growth performance was seen in categories like wellness bars and gels, and nut and seed butters.
• A shift to sustainable. Close to 40% of manufacturers produced sustainable products, up 22% from last year. Among retailers, sustainable products accounted for 16% of product sales. Along with non-GMO, the supply chain predicts sustainable will be the claim most interesting to consumers in the next three years.

Consumers are especially focused on specialty foods in the refrigerated sections. Categories with the biggest sales growth in this area include refrigerated juices and functional beverages up 30.7%, refrigerated lunch and dinner entrees up 33% and yoghurt and kefir up 27.2%.
Development in the Metos Manufacturing range is based upon a deep understanding of the customer and their business operations. This, combined with more than 90 years of profound technological experience, has developed the Metos Manufacturing perception of a kitchen as a whole where state of the art systems and professional equipment add value beyond single products.

To find out more about Metos Proveno, contact Moffat Australia on 1800 023 953 or Moffat New Zealand on 8800 663 328.