To increase the worldwide consumption of mushrooms, the Initiative is greatly dependent on new research continually filling the pipeline. A January call for Letters of Interest issued by the U.S. Mushroom Council and its funding partner – the Australian Mushroom Growers’ Association – resulted in 43 project proposals worth approximately US$7M from 11 different countries. This incredible response demonstrates the escalating interest in mushroom nutrition research throughout the world.

However, there are limited funds available from the U.S. and Australia - approximately $2 M over the next 2 years. This means that some potentially worthy projects cannot be pursued. Research generates the credible communication/information base and requires significant funding. It is important that as many countries as possible contribute to the Initiative and the Research Discovery Program to ensure we can maintain an adequate, global flow of new information about the health benefits of mushrooms. Contact Greg Seymour, Project Manager of the Initiative, to find out how to participate: seymour@amga.asn.au.
MUSHROOM RESEARCH

Food Processing Effects on Edible Mushrooms


One of the possible strategies to suppress inflammation, a well-known contributing factor to many age-related chronic diseases, is the use of functional foods with anti-inflammatory properties. Edible mushrooms are attracting more and more attention as functional foods since they are rich in bioactive compounds, but their anti-inflammatory properties and the effect of food processing steps on this activity has not been systematically investigated. In the present study, White Button and Honey Brown (both *Agaricus bisporus*), Shiitake (*Lentinus edodes*), Enoki (*Flammulina velutipes*) and Oyster mushroom (*Pleurotus ostreatus*) preparations were tested for their anti-inflammatory activity in lipopolysaccharide (LPS) and interferon-γ (IFN-γ) activated murine RAW 264.7 macrophages. Potent anti-inflammatory activity (IC50<0.1mg/ml), measured as inhibition of nitric oxide production, could be detected in all raw mushroom preparations, but only raw Oyster (IC50=0.035mg/ml), Shiitake (IC50=0.047mg/ml) and Enoki mushrooms (IC50=0.099mg/ml) showed also potent inhibition of TNF-α production. When the anti-inflammatory activity was followed through two food-processing steps, which involved ultrasonication and heating, a significant portion of the anti-inflammatory activity was lost suggesting that the anti-inflammatory compounds might be susceptible to heating or prone to evaporation.

Effects of Pleurotus Sajor-caju on Lipogenesis, Lipolysis and Oxidative Stress


The study investigated the effects of *Pleurotus sajor-caju* mushroom on lipogenesis, lipolysis and oxidative stress in 3T3-L1 cells. The β-glucan-rich polysaccharides (GE) from *P. sajor-caju* stimulated lipogenesis and lipolysis but attenuated protein carbonyl and lipid hydroperoxide levels in 3T3-L1 cells. This extract caused an increase in the expression of 5'-AMP-activated protein kinase subunit γ-2 (PKRAG2) and 5'-AMP-activated protein kinase subunit γ-3 (PKRAG3) when compared to control (untreated) cells. Moreover, GE induced the expressions of hormone-sensitive lipase, adipose triglyceride lipase enzymes, leptin, adiponectin and glucose transporter-4 in 3T3-L1 cells which may have contributed to the lipolytic and insulin-like activities observed in this study. These findings suggest that GE is a novel AMPK activator that may be valuable in the formulation of nutraceuticals and functional food for the prevention and treatment of diabetes mellitus.
**Association Between Mushroom Intake and Risk of Breast Cancer; Meta-Analysis**


Epidemiological studies have investigated the potential anticancer effects of mushroom intake. This review aims to clarify the evidence on the association of dietary mushroom intake with breast cancer risk and to quantify its dose-response relationship. Relevant studies were identified by a search of PubMed, Web of Science and Google Scholar up to December 31, 2013. Observational studies with relative risks (RRs) or hazard ratios (HRs) or odd ratios (ORs) and 95% confidence intervals (CIs) of breast cancer for three or more categories of mushroom intake were eligible. The quality of included studies was assessed by using Newcastle-Ottawa Scale. A dose-response meta-analysis was performed by utilizing generalized least squares trend estimation. Eight case-control studies and two cohort studies with a total of 6890 cases were ultimately included. For dose-response analysis, there was no evidence of non-linear association between mushroom consumption and breast cancer risk (P= 0.337) and a 1 g/d increment in mushroom intake conferred an RR of 0.97 (95% CI: 0.96–0.98) for breast cancer risk, with moderate heterogeneity (I2= 56.3%, P= 0.015). Available menopause data extracted from included studies were used to evaluate the influence of menopausal status. The summary RRs of mushroom consumption on breast cancer were 0.96 (95% CI: 0.91–1.00) for premenopausal women and 0.94 (95% CI: 0.91–0.97) for postmenopausal women, respectively. Our findings demonstrated that mushroom intake may be inversely associated with risk of breast cancer, which need to be confirmed with large-scale prospective studies.

**Agaricus Sylvaticus Effect on Adverse Events of Chemotherapy**


This study evaluated the effects of dietary supplementation of *Agaricus sylvaticus* on clinical and nutritional parameters in breast cancer (BC) patients undergoing chemotherapy. Breast cancer represents the highest incidence of malignancy in women throughout the world. Medicinal fungi can stimulate the body, reduce side-effects associated with chemotherapy and improve the quality of life in patients with cancer.

In a randomized, placebo-controlled, double-blind, clinical trial carried out from September 2007 to July 2009, forty six patients with BC, Stage II and III, were randomly assigned to receive either nutritional supplement with *A. sylvaticus* (2.1 g/day) or placebo. Patients were evaluated during treatment period. Patients supplemented with *A. sylvaticus* improved in clinical parameters and gastrointestinal functions. Poor appetite decreased by 20% with no changes in bowel functions (92.8%), nausea and vomiting (80%). The investigators state that dietary supplementation with *A. sylvaticus* improved nutritional status and reduced abnormal bowel functions, nausea, vomiting, and anorexia in patients with BC receiving chemotherapy.

**Lentinula Edodes Mycelia Extract with Postoperative Adjuvant Hormone Therapy with Breast Cancer Patients**


Extract of *Lentinula edodes* mycelia (LEM) is currently utilized as an oral biological response modifier (BRM) medicine for cancer patients. However, its effectiveness for breast cancer patients with postoperative adjuvant hormone therapy has not yet been scientifically verified. This study investigated the influence of LEM on the quality of life (QOL) and immune response in 20 breast cancer patients undergoing postoperative adjuvant hormone therapy. They received only hormone therapy in the first 4 weeks followed by hormone therapy and LEM during the next 8 weeks. Laboratory tests, QOL score and peripheral blood cytokine production levels were evaluated during the study period. No changes in QOL or cytokines were noted after the first 4 weeks. In contrast, during the following combined therapy period, improvements were noted in QOL and cytokine levels. Although a future large-scale investigation is necessary to confirm these results, these data suggest that the concomitant use of LEM with postoperative adjuvant hormone therapy improves the QOL and immune function of patients.

**Evaluation of a Consumer-Friendly Protocol to Increase Vitamin D2 in Mushrooms Purchased at Retail**

Phillips V, Rasor A. A nutritionally meaningful increase in vitamin D in retail mushrooms is attainable by exposure to sunlight prior to consumption. *Journal of Nutrition and Food Sciences*. 2013; 3:236. doi:10.1712/2155-9600.1000236. This is an Open Access article.

The vitamin D2 content of white button mushrooms is relatively low. UV exposure produces vitamin D2 by rapid conversion of ergosterol to ergocalciferol. Commercial-scale UV treatment has been used to produce vitamin D-enhanced mushrooms. The reliability of a consumer-friendly protocol to increase vitamin D2 in mushrooms by a nutritionally meaningful amount using exposure to sunlight was evaluated.

continued on pg. 4
Sliced white button mushrooms were exposed to sunlight for 15, 30, or 60 minutes in 16 experiments at different times of day, seasons, and cloud cover. Vitamin D2 was measured by HPLC with 3H-vitamin D3 internal standard. Change in vitamin D2 per 70 g serving relative to untreated mushrooms was evaluated. Vitamin D2 in all unexposed mushrooms was <30 IU/70 g (<5% DRI) (median, <7 IU/70 g). Regardless of season, treatment for 15 minutes between 9:30 a.m. and 3:30 p.m. under partly cloudy to clear conditions increased vitamin D2 by 157-754 IU/70 g (26-126%DRI), and up to 1142 IU/70 g total increase was observed after 30 min. On overcast and mostly cloudy days the gain was 76-178 IU/70 g (13-30%DRI) after 15 minutes, but after one hour the level was comparable to 15 minutes of treatment in clear conditions. Trials by consumers at four different geographic locations resulted in increases of 367-905 IU/70 g. A preliminary trial showed dramatically elevated vitamin D2 contents in other mushroom types exposed 15 minutes under clear conditions. These results demonstrate that vitamin D2 in mushrooms can be reliably enhanced by at least 25% of the DRI (150 IU; 3.75 μg)/70 g serving by exposure to sunlight for as little as 15 minutes on a clear or partly cloudy day between 9:30 a.m. and 3:30 p.m., and >100% (>600 IU) in many cases. Even under conditions of lower UV intensity similar increases can be achieved after 30-60 minutes.

**Culinary-Medicinal Mushrooms and Neurodegenerative Diseases**


Although at its infancy, accumulated evidence suggested that culinary-medicinal mushrooms may play an important role in the prevention of many age-associated neurological dysfunctions, including Alzheimer’s and Parkinson’s diseases. Efforts have been devoted to a search for more mushroom species that may improve memory and cognition functions. Such mushrooms include *Hericium erinaceus*, *Ganoderma lucidum, Sarcodon spp.*, *Antrodia camphorata, Pleurotus giganteus, Lignosus rhinocerotis, Grifola frondosa,* and many more. The investigators reviewed over 20 different brain-improving culinary-medicinal mushrooms and at least 80 different bioactive secondary metabolites isolated from them. The mushrooms (either extracts from basidiocarps/mycelia or isolated compounds) reduced beta amyloid-induced neurotoxicity and had anti-acetylcholinesterase, neurite outgrowth stimulation, nerve growth factor (NGF) synthesis, neuroprotective, antioxidant, and anti-(neuro)inflammatory effects. The *in vitro* and *in vivo* studies on the molecular mechanisms responsible for the bioactive effects of mushrooms are also discussed. Mushrooms can be considered as useful therapeutic agents in the management and/or treatment of neurodegeneration diseases. However, this review focuses on *in vitro* evidence and clinical trials with humans are needed.

**High Dose Shiitake Mushroom, Obesity and Fatty Liver: Mechanism**


Shiitake mushroom have been shown to have health benefits such as lowering plasma lipids and preventing body weight gain. However, their underlying mechanisms are largely unknown. This study assessed the potential underlying mechanism of Shiitake mushrooms in lowering plasma triacylglycerol (TAG) in rats fed a high fat diet (HFD). Forty Wistar rats were divided randomly into four groups and fed 50% HFD modified from standard diet of AIN-93 with an addition of nil, a low dose (LD-M): 0.7%, medium dose (MD-M): 2%, or high dose (HD-M): 6% (wt:wt) for six weeks. Diets were isocaloric containing ~50% energy from fat. After six weeks’ dietary intervention, the rats were sacrificed, and blood and tissue samples were collected. The HD-M group showed a significantly higher ratio of liver weight to 100 g body weight (p < 0.05), a more severe hepatic steatosis marker, such as hepatocyte ballooning (p < 0.0001), and more liver triacylglycerol content than LD-M and MD-M (p < 0.05). HD-M also showed a significantly decreased ratio of phosphatidylcholine (PC) to phosphatidylethanolamine (PE) compared to HFD (p < 0.05), however, there were no differences compared to HD-M and MD-M. Our results also showed a positive association between the dosage, liver TAG, and liver ballooning histology. A negative association was found between the mushroom dosage and the ratio of liver PC to PE. This study showed the mechanism of how high-dose Shiitake mushroom (HD-M) prevents obesity by increasing TAG accumulation in the liver, rather than adipose tissue.

**Experimental Biology Abstracts**

The following research, funded through a partnership between the Australian Mushroom Growers’ Association and the U.S. Mushroom Council, was presented at the April meeting of Experimental Biology in San Diego, California. These abstracts appear in the *FASEB Journal*.


The consumption of mushrooms has been shown to lead to a number of health benefits. To determine the effect of Portabellla mushroom intake on the glycemic responses of a young, healthy population following an Oral Glucose Tolerance Test (OGTT),

*continued on pg. 5*
Mushroom intake has been shown to be beneficial in weight management, immune function and quality of life. To determine the effect of chronic Portabella mushroom intake on functional fitness in older men and women, seventeen subjects (men=5 women=12: age 51.6±3.0 years old, Weight 84.1±4.6 kg, BMI 30.1±1.8, Body Fat% 29.8±2.5%) consumed two Portabella mushroom caps/wk for 12 weeks. Anthropometric measures (weight, BF%, BMI, LBM) and quality of life surveys (Yale Physical Activity survey, SF36v2 general health survey, CES depression survey, and a 3 day diet record) were taken at baseline and after 12 weeks. All subjects lost weight (P<0.02, combined) with men having a greater weight loss of 1.7 kg (P<0.03). Fasting blood glucose was decreased in all (106 to 97 mg/dL, P<0.02) with men having a greater decline (120 to 105 mg/dL), P<0.01). Quality of life measures did not change throughout the duration of the study. Chronic mushroom intake may cause weight loss in men and women and lower fasting glucose.

Oxidative stress & vitamin D (vitD) deficiency increase reactive oxygen species and low-grade inflammation contributing to type 2 diabetes (T2D). To determine the effects of nutrition intervention with an antioxidant from WBM on T2D risk, we conducted 20 analyses of results from a study of health effects of vitD-enriched-WBM in pre-diabetics. Group vitD intakes varied, but had no influence on oxidative risk factors. All of the 37 pre-diabetic subjects consumed 100g WBM/d for 4 m in this study, enabling us to assess changes from baseline of risk factors associated with ergothioneine (ergo) antioxidant intake from WBM. As shown below, we used paired-t-tests to assess significant change from baseline for serum ergo & biomarkers of risk at 4 m (P1), and at 5 m (P2) [1m after diet ended]. Early analyses show significant (P<0.01) decreases from baseline of pro-oxidant, advanced glycation end products with WBM-ergo, at 4 & at 5 m, for all but ORAC. We conducted 20 analyses of results from a study of health effects of WBM-ergo, adiponectin & ORAC, at 4 & at 5 m, for all but ORAC. We conclude WBM are bioavailable food sources for the antioxidant ergo in older pre-diabetic adults & their consumption effectively modifies risk factors for T2D.

<table>
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<th>4 m</th>
<th>5 m</th>
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<th>P²</th>
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<td>8-isoprostane</td>
<td>178±88</td>
<td>166±72</td>
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<tr>
<td>Leptin</td>
<td>24.3±14.3</td>
<td>24.9±15.6</td>
<td>24±14</td>
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<td>.98</td>
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<td>Adiponectin</td>
<td>7.9±3.2</td>
<td>8.8±3.5</td>
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<tr>
<td>ORAC</td>
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</tbody>
</table>

8 men and 8 women (19 to 29 yo, avg = 24; Body Fat % 18.4±7.2; Fasting Glucose 89.2±4.0) completed 3 modified OGTTs over a 2 week period. The OGTTs were evaluated in response to a 75g Glucose Drink (G), a 75g Glucose Drink with 9.5g Portabella powder (MG), or 9.5 g Portabella powder with Stevia/flavored water (M). Fasting and 30 min blood samples were collected for 2 h. Glucose levels were only elevated with G and MG with MG being higher in men at 30 min (P<0.02) and women at 60 (P<0.005) and 120 min (P<0.01). Insulin was higher in G and MG and showed a more gradual decline with MG in women. In women, hunger (Likert Scale) increased by 120 min (P<0.05) during G which was eliminated by addition of mushroom powder. Mushroom powder reduced postprandial hypoglycemia, rapid insulin decrease and elevated hunger in women compared to glucose alone. Mushrooms may moderate postprandial glucose related responses.
News from Australia

Glenn Cardwell

Australia’s Healthy Weight Week

This year the Dietitians Association of Australia promoted Australia’s Healthy Weight Week (AHWW) in February, rather than January, in the hope there would be more media interest and greater dietitian support. The change in date worked. Four times the number of dietitians were involved in promotional events around the country than were involved in 2013. This meant that, as a sponsor of AHWW, mushrooms received greater media publicity and were directly involved in events, especially in Adelaide and Melbourne. In the photo, Victorian dietitians leaped for joy with Mighty Mushroom during an event at Southbank in the heart of Melbourne during which passers by learnt about healthy eating – including the Power of Mushrooms - and fun physical activities including Zumba classes.

In another event CSIRO, which produces the biennial Mushroom and Health Report, provided guest speakers who spoke about how mushrooms make a big difference to health.

Four times more dietitians get involved in Australia’s Healthy Weight Week.

Talking Research e-Newsletter

Our last e-newsletter to health professionals focused on including mushrooms into recipes to boost the flavour, reducing the need for salt, as part of Salt Awareness Week in March. Coincidently, Coeliac Week was also in March, so the same newsletter acted as a reminder that mushrooms fit perfectly into a gluten-free diet.

Diabetes Magazine

Diabetes magazine makes mushrooms the theme

Sometimes all the stars are aligned. We were asked to provide some recipes for the magazine Diabetes Matters, specifically for people with diabetes in the family. In response we also offered to write an article. To our surprise that offer was accepted. Imagine our delight when our article and recipes took 6 entire pages of a 40 page magazine. When you offer more than is requested, sometimes it can pay off.
Health Professional Promotion

The CheckUP organisation in Queensland provides information to health professionals and administrators. At the end of 2013 they surveyed their 10,000 members. Of those that responded to the survey, it was clear that virtually every dietitian member knew that mushrooms were a source of vitamin D when exposed to UV light. This was good news as we have been promoting mushrooms to Australian dietitians for the last five years.

However, very few other health professionals knew about vitamin D in mushrooms or that one button mushroom a day was associated with a much lower risk of breast cancer in women, so we still have a lot more to do in promoting the health benefits of mushrooms to this group. One small step in this direction was to write an article on mushrooms and health for their member e-newsletter.

Later, in April 2014, Glenn Cardwell spoke to the 160 CheckUP delegates at their workshop, followed by mushroom tasting (featured in the photo), making the day a complete success. It was another opportunity to sign people up for our newsletter, Talking Research, and to get mushroom recipes and information into doctors’ offices.

McGraw-Hill Yearbook

Publishers of the McGraw-Hill Yearbook of Science and Technology asked the Australian mushroom industry to write a 1000 word article on the international commercial production of vitamin D mushrooms. It was pleasing that the publishers came to the mushroom industry to source the article. Although it is a science-based publication, the article was for a lay audience, particularly upper high school and college students. The yearbook will be published at the end of 2014.

NEWS FROM SOUTH AFRICA

Julliet Ramatshila

Health is the New Sexy

The media in South Africa is swamped with research reports that repeatedly point out that half of all South Africans are either overweight or obese. And, although under-nutrition is still seen in some parts of the country, urbanites now consume too much fat, protein, and refined sugar.

The South African Medical Research Council (MRC) is calling for a change in health policies to force change amongst South Africans who are unhealthy eaters, inactive, prone to chronic diseases and dying younger.

Over the past 40 years staggering trends indicate that:

- Average life expectancy has dropped from 60 to 50
- About 50% of all South Africans are overweight or obese
- 22% of children aged 1 to 9 are either overweight or obese
- There is a large increase in lifestyle related cancers
- 6 million South Africans have high blood pressure
- 5 million South Africans have high cholesterol
- 1.5 million have diabetes
- 7 million people smoke

With the media hungry for information on healthier eating habits through increasing demand from consumers who are more informed about the dangers of obesity, we now have a receptive audience for a healthier alternative being mindful of the fact that South Africans are not going to switch to lettuce leaves overnight.

Enter healthy, versatile and delicious mushrooms - low in calories, sodium and fat and high in nutrients. Added to this, there is also the meatiness of mushrooms that make them great meat replacements. Subsequently health is the one major central pillar and driver of public relations (PR) in South Africa.
Activities Ramp up the Health Message

**Health presentations**

Dr Martmari van Greuning developed an extensive PowerPoint presentation on all the health aspects of mushrooms and we regularly do presentations to small groups of key media. We find the media hugely receptive to the information they receive and this assists in creating greater awareness of the benefits of mushrooms beyond their wonderful taste and flavour.

**Recipe development**

We continue to develop mushroom recipes that are delicious, but more importantly healthy. Our development is hugely mindful of crucial aspects such as fat, sodium and cholesterol content – the health issues that are red-flagged in South Africa. To drive home the point, we do nutritional analyses of all recipes developed to assist the media in providing useful health information to consumers. Linked to the nutritional analysis is a recipe cost analysis to combat the perception of mushrooms as expensive.

**Targeted media send-outs**

News releases are sent to targeted media on a regular basis. The release content highlights current health issues that affect everyday life such as gout, cholesterol, and gluten issues. We also tie in with seasonal, national and international health days to subtly link mushroom benefits to topical issues. The objective remains to create awareness and educate around health benefits and nutrition. Judging by the coverage we receive in the media, our message has a positive impact on the audience as it shows them an easy way to eat for a good health.

**Social media**

We are now also including health messages (with beautifully designed FB posts) on our mushroom Facebook page ([www.facebook.com/mushroomsSA](http://www.facebook.com/mushroomsSA)) and we can see that our fans are responding positively to this information. We believe that combined with the recipes we provide; health information on Facebook will be a major driver for page growth. All our FB information is also posted on Twitter with the visuals we create. All our health posts go onto our website in the form of click through banners and this also drives traffic to the site ([www.mushroominfo.co.za](http://www.mushroominfo.co.za)). Lastly, we have now created a mushroom blog ([www.mushroominfo.co.za/blog](http://www.mushroominfo.co.za/blog))

Recipe cost analysis combats perception that mushrooms are expensive.

**Check out Confessions of a Fungi Lover.**

called Confessions of a Fungi Lover, where we will have fun discussions about the joy of mushrooms, all the health aspects and lots of lifestyle related information and we are looking forward to huge growth in terms of registered followers. The blog is posted on the Facebook and Twitter pages with post promotions and small competitions to create awareness.

Here are other examples of the creative we use to communicate health and nutrition information.
NEWS FROM THE UNITED KINGDOM

Stephen Allen

Just Add Mushrooms

The Mushroom Bureau’s ‘Just Add Mushrooms’ 3-year campaign was launched in October 2013 and will run to July 2016 in the United Kingdom (UK) and Ireland. The campaign’s 3 year £2.4m budget is co-financed 50:50 by members of the Mushroom Bureau and the European Union and will use a mix of marketing channels including online and press advertising, continuous public relations and ongoing social media (Facebook, Twitter, Tumblr, and YouTube cooking demonstrations).

Our core audience includes 25-45 year old meal providers that don’t regularly put mushrooms into their shopping trolley – they are not sophisticated cooks nor do they prepare complex recipes. They have children and need to put low-cost, filling family meals on the table every week. Since many households do not buy mushrooms – or buy them infrequently – and do not know how to include them in family meals, the campaign is designed to inspire mothers to try new meal ideas featuring mushrooms as an ingredient – and ‘Just Add Mushrooms.’

We chose Nadia Sawalha as the celebrity to launch the ‘Just Add Mushrooms’ campaign since she is well recognised across the UK and Ireland through her weekend cookery show, regular food columns in high profile magazines and newspapers – and is known for her passion for healthy food as well as a lively, down-to-earth personality. In our materials, Nadia wears her mushroom hat and the mushroom dishes are intentionally prominent to grab reader’s attention.

Just Add Mushrooms inspires new meal ideas.

Justaddmushrooms.com features 70 delicious mushroom recipes.
The U.S. Mushroom Council (Council) has been traveling coast to coast early this year to participate in nutrition conferences that reach leading American health influencers across multiple categories:

- Media contributors at Food 3000
- Policy makers and industry at the Partnership for Healthier America Building a Healthier Future Summit
- Supermarket dietitians at Oldways Supermarket RD Symposium
- Doctors and physicians at the Culinary Institute of America’s Healthy Kitchens, Healthy Lives conference

Across audience and geography, the constant throughout each event was delicious food featuring the Blendability technique that combines finely chopped mushrooms and meat, and relationship building. Following is a summary of the Council’s presence and learning at each event.

Food 3000

The Council hosted a mushroom educational session at Food 3000 – an annual destination event convening of the nation’s preeminent food and nutrition media influencers. The Council approached the session as a “mini summit,” synthesizing the most salient portions of the Mushrooms & Health Summit (nutrition, sustainability and culinary) into a 90-minute presentation titled, “The Third Food Kingdom: Fungi is Out of the Dark and into the Health Spotlight.” Experts in each area presented on behalf of the Council and earned a 4.91 out of 5 rating from attendees on overall session quality and the Council received high praise for the subjects covered, caliber of speakers and information shared. New relationships have already yielded mushroom coverage, celebrating science at the core, appearing in the Atlanta Journal Constitution, Chicago’s Daily Herald and prominent nutrition blogs as well.

The Council’s presentation, “The Third Food Kingdom: Fungi is Out of the Dark and into the Health Spotlight,” earned a 4.91 out of 5 rating from attendees.
Supermarket Dietitians at Oldways

The Council joined representatives from the 40 of the nation’s top grocery chains at the Oldways Supermarket RD Symposium in Scottsdale, AZ. Hosting a Mexican Fiesta lunch with three applications of mushroom taco fillings (a beef and mushrooms blend beef; a turkey and mushroom blend; and a vegetarian option) gave attendees the opportunity to taste the benefits that they’d been hearing about in sessions and discussions. The symposium was a chance not only to educate, but to listen to the needs of this important audience who serves as the last contact before point of sale. To date, the Council is implementing two summer mushroom events in-store to coincide with its consumer-facing “Swap It or Top It” recipe contest.

Culinary Institute of America’s (CIA) Healthy Kitchens, Healthy Lives (HKHL)

The Council sponsored the CIA conference in Napa Valley, CA to engage with “food-forward health professionals” – 600+ physicians, nurses and other health-care professionals who have self-identified as wanting to learn more about cooking techniques and strategies for healthy eating. The Wall Street Journal shared a corresponding article, “A Prescription for Delicious/Health Food for Foodies,” detailing the purpose and objectives of HKHL and called out mushrooms as a “culinary prescription,” suggesting that mushrooms are at the cross-section of culinary, nutrition, versatility and accessibility. Attendees got a taste of mushroom versatility, flavor and nutrition through recipe samples at breakfast, lunch and dinner. Onsite activities included mushroom food-specific activities featuring numerous varieties and applications across at least ten recipes, including both meat and plant-based Blendability.
Mushrooms Get Social

AUSTRALIA
Power of Mushrooms Website
My Mushrooms Blog
Mighty Mushroom Twitter
Mushroom Lovers Club Facebook
Power of Mushrooms YouTube

CANADA
Mushrooms Canada Website
Mushrooms Canada Blog
Mushrooms Canada Twitter
Mushrooms Canada Facebook
Mushrooms Canada Pinterest
Mushrooms Canada YouTube

ITALY
Italian Association Fungicolatori (AIF) Website
Italian Association Fungicolatori (AIF)
info@fun.go.it email
Funghincucina Twitter
Funghincucina Facebook
Funghincucina Pinterest

NETHERLANDS
Champignonidee Website
Champignonidee Twitter
Champignonidee Facebook
Champignonidee Pinterest
Champignonidee YouTube
Champignonidee Google+

SOUTH AFRICA
SAMFA Website
Fresh Mushrooms Twitter
MushroomsSA Facebook

SPAIN
CTICH Website
Champinonidea Website
Asocamprioria Twitter
Asoc Prof Cultivadores Champiñon de La Rioja, Navarra y Aragon Facebook
Asocamprioria YouTube
ASOC.PROF.CULT Champiñón DE LA RIOJA Google+

UNITED KINGDOM & IRELAND
Just Add Mushrooms Website
Just Add Mushrooms Twitter
Just Add Mushrooms Facebook
Just Add Mushrooms YouTube

UNITED STATES
Mushroom Info Website
The Mushroom Channel blog
Mushroom Channel Twitter
Mushroom Channel Facebook
Fresh Mushrooms Pinterest

Resources
Be sure to visit the Mushrooms and Health website www.mushroomsandhealth.com. Send what’s happening in your country to communicate the benefits of mushrooms to consumers, shoppers, households, doctors, health professionals and the media to info@mushroomsandhealth.com.

Note: The Bulletin provides links to other sites for your convenience and information. These sites contain information created, published, maintained or otherwise posted by organizations independent of the Initiative which does not endorse, approve, certify or control these sites and does not guarantee the accuracy of the information contained on them.

Initiative Project Team
- Greg Seymour, President, ISMS; General Manager AMGA, Australia; Project Manager, Mushrooms and Health Global Initiative
- Bart Minor, President, Mushroom Council, United States
- Mary Jo Feeney, Mushrooms and Health Global Initiative Operations Manager, Bulletin Editor, United States
- Glenn Cardwell, Accredited Practising Dietitian, Nutrition Impact P/L, Australia
- Chris Rowley, Communications Consultant, Australia
- Juan Valverde, Food Science Programme Manager, Monaghan Mushrooms Group, Ireland
- Heidi Gengler, Vice President, Edelman Public Relations, United States

Strategic Communications Group
Members of the Strategic Communications Group strengthen the Initiative’s communication capability and develop a local public relations presence in each country/market that is participating in the project. Members of this group help facilitate stories about mushrooms and health appearing in their local media, monitor mushroom nutrition and health research, liaison with scientists, media and other influencers, and provide feedback to the Initiative.
They include:
- Ignace Deroo – Belgium
- Elizabeth O’Neil Meurehg – Canada
- Kent Stenvang – Denmark
- Franz Schmaus – Germany
- Annemieke Bouwmeester – Netherlands
- Jose Antonio Jimenez Hernandez – Spain
- Stephen Allen – United Kingdom