

# SNIPPETS

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## 'RESURRECTION PLANT' RESEARCHER RECEIVES HARRY OPPENHEIMER FELLOWSHIP AWARD

The Harry Oppenheimer Fellowship Award was granted to Professor Jill Farrant, research chair in the molecular physiology of plant desiccation tolerance at the University of Cape Town. Prof. Farrant is famous for her research on "resurrection plants" like the *bobbejaanstert* (*Xerophyta retinervis*). According to Prof. Farrant, these plants, which are mostly found in Africa, can lose up to 95 percent of their water content and be in "dead state" for 15 years but will "green up" in one to two days after they are watered.

The grant worth €100,000 will be used by Farrant and colleagues to investigate the genome of resurrection plants that will aid in developing the drought resistance of crops. Oppenheimer Memorial Trust trustee Bobby Godsell said that Farrant is the tenth recipient of the award for high-end research. The results of the study will be used to ensure the food security of the world's increasing population, which may rise up to 9.22 billion by 2075, as projected by the United Nations.

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## VITAMIN E SHOWS IMMUNE BOOSTING POTENTIAL.

Tocotrienols, a form of vitamin E, may enhance the function of immune cells and help ensure healthy immune function as we age, suggests new data from Tufts University.

Immune function and the activity of T cells naturally declines with age, but daily supplements of a mixture of the four types of tocotrienol led to improvements in the T cell function in old mice, according to findings published in the Journal of Nutrition.

Tocotrienols are only minor components in plants, although several sources with relatively high levels include palm oil, cereal grains and rice bran. While the majority of research on vitamin E has focused on alpha-Tocopherol, studies into

tocotrienols account for less than one per cent of all research into vitamin E.

"However, increasing evidence has suggested that tocotrienols have notably distinct biological properties not shared by the tocopherol family," wrote the researchers, led by Dayong Wu from the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University. *NUTRAingredients.com 10 Jun, 2010*. Journal of Nutrition. Journal of Nutrition. "Dietary Supplementation with Tocotrienols Enhances Immune Function in C57BL/6 Mice"

## TEQUILA PLANT SHOWS PREBIOTIC POTENTIAL

Inulin extracted from Agave boosts the populations of beneficial bacteria and may represent an economically interesting alternative to chicory inulin, says a new study.

Scientists from the National Autonomous University of Mexico and the University of Reading report that inulin extracted from *Agave tequilana* boosted the numbers of bifidobacteria and lactobacilli to a similar extent to other commercial inulins.

The researchers wrote that "This is the first study reporting a potential prebiotic mode of activity for *Agave fructans* which significantly increased populations of bifidobacteria and lactobacilli compared to cellulose used as a control".

The study supports findings from the archaeological record, as highlighted by a recent report by archaeologist Jeff Leach, head of the Paleobotanics Lab in New Orleans, and Kristin Sobolik from the University of Maine.

Well-preserved coprolites (fossilised human faeces) from dry cave deposits in the northern Chihuahuan Desert showed that our ancestors from 10,000 years ago adhered to a plant-based diet in this area of the world, predominantly from agave (*Agave lechuguilla*), sotol (*Dasyliirion* sp.) and onion (*Allium drummondii*). The faecal samples showed that our ancestors regularly consumed in excess of 100 grams per day of prebiotic fibres – considerably more than modern recommendations of between five and eight grams per day for inulin and oligofructose. *NUTRAingredients 31 May 2010*.

## ICELANDS EYJAFJALLAJOKULL VOLCANO

The amount of carbon dioxide predicted to be emitted per day from Iceland's volcano is 150 to 300 kilotons. This places it in the same emissions league as a small to medium sized European country.

*Chemistry World | May2010*.

## UK WHEAT YIELDS BOOSTED BY ROOT BACTERIA

Increased yields of UK wheat varieties through the use of plant growth promoting root bacteria could render chemical fertilizers obsolete, if the preliminary results of a four-year, international study are substantiated.

An EU Framework 6 project, RHIBAC (Rhizobacteria for Reduced Inputs in Wheat), which draws on scientific expertise from international research groups, claims to have successfully increased wheat yields using rhizobacteria, according to a report on agriculture news monitor Stackyard.

High levels of chemical fertilisers, such as ammonium nitrate, when applied to wheat and other arable crops, have allowed vastly increased yields. However, chemical fertilisers are becoming increasingly expensive, and can contribute to a range of environmental problems, in the EU and elsewhere. *NUTRAingredients.com 18 May 2010*

## SIR JAMES BLACK, OM (1924-2010)

Nobel prize-winning scientist Sir James Whyte Black, whose medical discoveries are considered among the most important in the history of medicine, died at the age of 85 on 10 April 2010.

Black's research changed the way scientists search for new drugs, and he pioneered the concepts of receptor theory and rational design, where molecules would be designed so that they target specific biological receptors believed to play a role in disease. Previously, hundreds of compounds would be tested aimlessly in the vain hope of identifying an active molecule. *Chemistry World | May 2010*

## EU MEPS BLOCK 'MEAT GLUE' AUTHORISATION

The European Parliament has blocked the authorisation of bovine and porcine thrombin as an additive to bind together meat morsels into one piece.

In a recent vote, MEPs stated that use of the 'meat glue' creates reconstituted meat products that "carry an unacceptably high risk of misleading consumers".

Thrombin, an enzyme derived from blood plasma of pig or cattle, can be used to connect separate pieces of reclaimed meat together, so that they appear to be one large slab. In 2005, the European Food Safety Authority (EFSA) had issued a positive opinion for its use, prompting the European Commission to propose its addition to the positive list of additives in annex IV of directive 95/2/EC.

CLITRAVI, the European association of the meat processing industry, told FoodNavigator.com that it "deplores" the fact that this resolution undermines innovation in the food industry.

*FOODnavigator.com 20 May 2010*

## IFIC SURVEY: CONSUMERS FAVOR BIOTECH FOODS

The International Food Information Council (IFIC) recently released the result of their survey conducted last April 5 to 26, 2010 in a report entitled Consumer Perceptions of Food Technology. The survey was conducted in the USA and 750 adult respondents comprise the total sample. An overwhelming number of respondents favor the purchase of biotechnology-

produced foods based on their environmental benefits and sustainable agricultural practices.

Several respondents claim that they will buy biotech food because they provide more helpful fats like Omega-3s (76%); others say they buy biotech foods to avoid trans fat (74%); some believe that biotech foods have improved taste and freshness (67%); and many also patronize wheat-flour products of biotechnology because more people are fed with less resources used in production. It is notable that there is low overall awareness of consumers regarding food biotechnology, but still, zero percent or none of them listed biotech food as something to be avoided. *Crop Biotech Update 4 June 2010*

Visit <http://www.foodinsight.org/Resources>

## USDA SCIENTISTS HELP IMPROVE POTATO STORAGE QUALITY

Agricultural Research Service (ARS) scientists in North Dakota are evaluating the storage properties of promising new potato varieties that could greatly improve potato quality for growers throughout the United States.

Seventy percent of all potatoes in the United States are processed into chips, French fries, and dehydrated potato flakes. Maintaining adequate potato storage quality for processing—in some cases, up to 10 months—is vital to potato producers and processors.

When potatoes are harvested, they're dormant and don't sprout. During storage, dormancy ends and sprout growth commences. Sprouting results in numerous biochemical changes, which are detrimental to the nutritional and processing qualities of potatoes. Postharvest sprouting is typically controlled during storage with chemicals that inhibit the process.

The long-term goal of the program is to find less costly, nonchemical solutions to the problem by identifying the genetic cause for these early-sprouting tubers. The researchers have identified internal mechanisms that signal sprouts to grow, and they are currently isolating the genes responsible for these signals.

<http://www.ars.usda.gov/is/AR/archive/may10/potatoes0510.htm> IFT Weekly Newsletter 12/5/10

## ACRYLAMIDE LEVELS DROP WITH EXCEPTIONS, SAYS EFSA SURVEY

The new report on acrylamide collated data from 2000 food samples across the European Union and Norway in 2008 and builds on previous surveys with the goal of tracking progress on efforts to reduce exposure.

The European Food Safety Authority (EFSA) said that in contrast to 2007 results that showed no clear trend towards lower acrylamide levels, the 2008 data reveals "a more apparent" downward trend.

This is particularly pronounced in certain product categories. EFSA said significantly lower acrylamide levels were reported for French fries, fried potato products for home cooking, soft bread, bread not specified, infant biscuit, biscuit not specified, muesli and porridge and other products not specified.

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**Snippets - contributions are welcome. Edited and produced by Dr. B Cole. – [drcole@cybersmart.co.za](mailto:drcole@cybersmart.co.za) / Fx 011 660 6444 with the help of the Northern Branch Committee.**