WN *Update*

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IUNS Granada conference. Bellagio workshop
Biting Big Food

Access June 2010 American Journal of Public Health paper on Big Snack here
Access July 2012 PLoS Medicine paper on Big Food here
Access December 2012 WN The Food System summary here
Access February 2013 The Lancet on Profits and Pandemics here
Access March 2013 WN The Food System on biting Big Food here
Access June 2013 Bellagio Declaration here



Coming to consensus. Boyd Swinburn, Carlos Monteiro, Francesco Branca, Corinna Hawkes at the Villa Serbelloni, Lake Como, in June, with colleagues

Como, Italy. Our Big Food Watch news team reports

Topic for the IUNS conference at Granada: access *www.icn.2013.com*

Regular *WN* readers may think they have seen this picture before, of some of the world's public health nutrition leaders outside the Villa Serbelloni, Lake Como, at the Rockefeller Center. Top row first and third from left are Carlos Monteiro, Boyd Swinburn (behind shades), then Rafael Claro, Juan Rivera and Simon Barquera. Middle row, third, fourth and sixth from left are Srinath Reddy, Francesco Branca of WHO, and Ricardo Uauy. At left of the all-woman line-up in front is Corinna Hawkes and in

the middle is Susan Jebb. The meeting resulted in a series of papers in Obesity Reviews, and a *Bellagio Declaration* with the lively title 'Countering Big Food's Undermining of Healthy Food Policies'. Its preamble states: 'The actions of Big Food have been the most significant force in blocking public health efforts to promote healthy food policies and reduce obesity in many parts of the world'.

Views on the activities of Big Food, published in *The American Journal of Public Health*, *PLoS Medicine*, and *The Lancet*, and *World Nutrition* are listed, with links, at the beginning of this story. The outcomes of the Bellagio meeting will be featured at the IUNS Granada conference – for details access the link to the final programme above.



Coming to consensus. Boyd Swinburn, Carlos Monteiro, Francesco Branca, Corinna Hawkes at the Villa Serbelloni in November, with more colleagues

Como, Italy. Our news team reports

Topic for the IUNS conference at Granada: access *www.icn.2013.com*

The June Bellagio meeting, masterminded by Barry Popkin, should not be confused with the November Bellagio meeting on the prevention of obesity worldwide, masterminded by Boyd Swinburn. Above is the picture published on the Association's home page in January this year. There are differences. Here the shutters of the window are open. In the front row, left, and third from left, centre, and right, are Carlos, Francesco (in the woolly), Boyd (shades) and Corinna. Colleagues this time include (top row, from left) David Sanders, Tim Lobstein and Mike Rayner, and (front row, next to Boyd), Shiriki Kumanyika. The outcomes of this INFORMAS (International Network for Food and Obesity Research, Monitoring, and Action Support) meeting will also be featured at the IUNS Granada conference – for details access the link to the final Granada programme above.

Anon. IUNS Granada conference. Bellagio workshop. Biting Big Food [Update] World Nutrition August-September 2013, ***4,*** *7, 454-455*



NOVA

IUNS Granada conference. The Food System

Access November 2012 The Food System summary in English here
Access November 2012 The Food System summary in Spanish here
Access December 2012 WN The Food System summary here
Access February 2013 The Lancet on Profits and Pandemics here
Access August 2013 The Lancet on food systems and nutrition here



Carlos Monteiro, Jean-Claude Moubarac, Geoffrey Cannon, Shu Wen Ng and Barry Popkin. The NOVA food classification is unveiled at IUNS Granada

Granada, Spain. Our news team reports

Topic for the IUNS conference at Granada: access *www.icn.2013.com*

What happens to food before we purchase and consume it, is crucial. That is to say, with food, nutrition and public health, the big issue is food processing. Readers of *WN* and now of many other journals, including *The Lancet in February this year*, are familiar with this thesis. It is now presented in a special paper in the journal Obesity Reviews, which will be on-line and available at the Granada conference. This is another product of the Bellagio meeting summarised above, which has been masterminded by the astoundingly energetic Barry Popkin of the University of North Caroline at Chapel Hill, the outstanding scholar on the topic of the linked demographic, nutritional and epidemiological transitions.

The paper begins: 'Food and drink products described as highly processed or as "fast food" are identified as convincing or probable causes of obesity and directly related chronic non-communicable diseases, in recent reports and papers based on literature reviews. However, dietary assessments and recommendations typically use classifications that largely overlook the significance of food processing, and in particular the types of processing involved in mass manufacture of food products, here identified as "industrial processing".

The rationale for the thesis of the paper, concerning the rapid dominance of ultra-processed products now also in the global South, is summarised in Box 1, below.

Box 1

The Food System: Ultra-processed domination

This is an extract from the fully referenced paper now published in Obesity Reviews

Since the 1980s, national food systems have been shaped by dominant international economic policies designed to promote the flow of capital and the rapid expansion of trade. International and global trade agreements, intensified since the 1990s, have enabled transnational food manufacturing, retailing, 'fast food' chains, and associated corporations, to become colossal The annual turnover of some transnational manufacturing corporations, collectively sometimes known as Big Food and Big Soda, and also Big Snack, is on a level with the gross national products of middle-size countries. They spend vast sums on advertising and marketing of their branded ready-to-consume products.

National and multinational supermarket chains, some owned by conglomerate corporations, have also rapidly increased in scale and reach, as have 'fast food' chains, at first in high-income countries and then globally. Their profits also come largely or mainly from ultra-processed products. In the global South the shift from small and specialist stores to supermarkets and smaller 'mini-markets' and 'convenience stores' first occurred in higher-income Latin America countries. Similar shifts also occurred in India and in other Asian countries such as Singapore, Hong Kong, South Korea and Taiwan, as available income increased. Thailand and China now both have a retail share of what is identified as 'processed/packaged food' of more than 60%. In lower-income countries and settings food manufacturing transnationals also work through small retailers, and even by hiring door-to-door sellers of branded 'popularly positioned products'.

As the nature of what is consumed has changed, so have the ways of consumption. Food and culinary ingredients are mostly made into and consumed as meals, usually at regular times and normally in specified places. Ultra-processed products are mostly consumed as snacks, almost any time, and anywhere. Up to the second half of the 20th century few adults consumed snacks. But now, in countries such as the US, Canada, Mexico, Brazil, and China, products in snack form amount to up to a quarter of all calories consumed. In China since 2000 snacking has tripled every two years. In lower income countries, many snacks are currently in the form of fresh food such as fruits, but as income increases, more and then most are ultra-processed products, as in the US. It is suggested that the global strategy of transnational food manufacturing corporations is to 'teach the world to snack' on their branded products from infancy to old age.

Meanwhile, members of The Food System team at the University of São Paulo convened by Carlos Monteiro have been hard at work, in partnership with officials at the UN Food and Agriculture Organization. The result is the NOVA classification of foods, which will be discussed at a special workshop at Granada immediately following the IUNS conference.

Workshop participants include Carlos Monteiro, Jean-Claude Moubarac, Renata Bertazzi-Levy and Geoffrey Cannon from the University of São Paulo, and Barrie Margetts, an authority in food classification, from the University of Southampton, and in his capacity as World Public Health Nutrition president. The meeting is convened by Ruth Charrondiere of FAO, together with Catherine Leclercq. Now see Box 2.

Box 2

The Food System: NOVA rationale

This is an extract from the fully referenced paper to be discussed at the Granada workshop

Food processing in any general sense is of course not a public health problem. Any criticism of food processing as such would be practically meaningless. Ever since the discoveries of the uses of fire, air and salt, and then of smoking, fermentation and other methods, food has been processed in various ways. Food preservation and other processes have helped to enable the development of civilizations as well as more specifically of food systems and supplies, and thus dietary patterns.

However, the nature, extent and purpose of food processing has changed and developed rapidly and dramatically as a result of industrialization and urbanization. The first phase, beginning in the 19th century, included increasingly efficient mechanised industrial manufacture of bread, biscuits, cakes, confectionery, jams, syrups, soft drinks, meat products and infant formula.

However, until well into the 20th century the main food-related public health problem in industrialized countries as well as in the rest of the world remained nutrient deficiencies and food insecurity. Later, as from the 1960s, ample supplies notably of relatively cheap fatty foods and food products were accompanied by rapid increases in cardiovascular disease at first in high-income countries, and then globally. Nevertheless, dietary recommendations, and the food classifications from which they were derived, remained focused on nutrients.

As from the 1980s there has been a profound change in patterns of food production and consumption, and in patterns of diet and prevalence of disease. The shift has been most dramatic in middle-income countries, but now is present even in low-income countries. A globalised food system now largely drives food supplies in most countries in the world. These food supplies are largely made up from ultra-processed products.

What therefore is needed now is a classification that corresponds to the relevant circumstances of the later 20th century and of this century. These include the phenomenal development of increasingly complex food science and technology; the creation of what now amount to globalised supplies of ready-to-consume products and their ingredients; the corresponding penetration of established food systems by very large transnational food product manufacturers; together with a worldwide uncontrolled epidemic increase of overweight and obesity and rapid rises of related chronic non-communicable diseases, most notably diabetes. NOVA is presented here as the classification that is needed

Next month *WN* will carry a full report on the NOVA classification, and its special relevance to understanding of food systems and supplies, patterns of diet and disease, and how to check and reverse what is now the pandemic of overweight and obesity. We will also report further on the Bellagio initiative, whose general purpose has been the prevention and control of chronic non-communicable diseases, with special attention to middle- and low-income countries where production and consumption of ultra-processed products, and rates of obesity and diabetes, are rocketing.

*Anon. IUNS Granada conference. The Food System. NOVA [Update]. World Nutrition August-September 2013, **4,** 7, 456-458*

Big Food Watch. IUNS Granada conference
Scientific conference or Big Food trade fair?



BIG FOOD WATCH

Access August 2009 PHN Out of the Box on conferences here
Access September 2010 WN editorial on conferences here
Access November 2011 WN editorial on public-private partnerships here
Access July 2012 PLoS Medicine paper on Big Food here
Access December 2012 WN The Food System summary here
Access February 2013 The Lancet on Profits and Pandemics here
Access 2013 ICN Granada sponsored presentations here
Access 2013 ICN Granada sponsors, opportunities here
Access this month's Big Food Watch on Nestlé 'Creating Shared Value' here





Coke and Nestlé are two of the platinum sponsors at ICN in Granada, each paying €75,000. Here's how they attracted custom at SLAN in Santiago 2009

Granada. Our Big Food Watch news team reports

Topic for the IUNS conference at Granada: access *www.icn.2013.com*

Are nutrition conferences now, not so much scientific meetings, as Big Food trade fairs? This question has been asked from time to time, in *Public Health Nutrition* and in *World Nutrition*. The lovelies in the pictures above on display at a recent international conference, promoting Coca-Cola and Nescafé, and their products, were enjoyed by many participants, and were a cause of concern for others.

Penetration of nutrition conferences by Big Food, Big Snack and Big Soda, prompted the Association, with the Brazilian national public health organization Abrasco, to mount *World Nutrition Rio2012* in April last year. The conference was supported wholly by registration fees and support from public bodies.

But general nutrition conferences, including those held in association with the International Union of Nutritional Sciences, are mounted in what seems to be a

steadily increasing partnership with those sectors of the food product manufacturing industry and allied and associated organisations, whose commercial interests conflict with those of public health. Does this matter? We guess that some people will say yes and some will say no, with varying emphases. We think the issue needs ventilation.

The volunteers who organise the scientific programmes of nutrition conferences may feel that carping critics need to get real. Times are tough. Financially Spain is down the drain. Governments – with exceptions – are not interested in providing public money. Nutrition societies and unions need the surpluses that come from conferences for their good work. The UN approves 'public-private partnerships' with conflicted industry. Most powerful players agree that Big Food is part of the solution to global malnutrition, in the form both of starvation and obesity. Many nutrition science researchers get some of their funding from industry or work for universities and other centres partly funded by industry, or else work for industry themselves.

These are realities. Below is one result, available on the official Granada website, as achieved by the professional organisers of the conference. Sponsors pay €75,000 (Platinum), €60,000 (Gold), and €40,000 (Silver). The corporations that are not Big Food or Big Snack are mostly Big Pharma.

PLATINUM SPONSORS	
Abbott Nutrition	The Coca-Cola Company
DSM	Nestlé Nutrition
PULEVA	Unilever
GOLD SPONSOR	
DANONE	
SILVER SPONSORS	
Eat Well, Live Well. AJINOMOTO	GENERAL MILLS
Hero	Mondelēz International



BIG FOOD WATCH

Box 1

Granada. Selling nutrition to Big Food and Snack

This is an extract from the Granada conference promotion 'Why Should You Be a Sponsor?, accessed on the official conference website.

A tailored sponsorship package of the Congress is a cost-effective opportunity to reach a large number of delegates within your target market.

Sponsorship is a proven tactic for marketing your brand: it combines the reach of magazine advertising with the power of direct mail and persuasion of face-to-face meeting, exposing your company directly to it's [sic] target market.

Congress participants are keen to improve their scientific knowledge. Involving your company with this powerful educational experience demonstrates your commitment to assisting their personal development.

Your company will benefit significantly from exposure to an interested, relevant and influential audience in an informal yet informative environment away from the competition of everyday distractions.

Key benefits to early commitment. Aligning your company early will ensure:
- Maximum exposure for your brand and increased opportunities to access not only the registered delegates but anyone receiving Congress printed or electronic marketing information.
- First choice of sponsorship opportunities to ensure alignment with your marketing aims

Box 1 (above) sets out the benefits to sponsors as these are advertised by the Granada conference professional organisers. It can be found on the conference website. Some of this might seem to be a bit hard-sell.

One feature of the Granada conference that seems to be rather massively expanded compared with previous conferences, is the sponsored scientific sessions. It's usual at nutrition conferences to have pre-breakfast, breakfast, lunch and evening sessions designed to advertise and promote industry and also a few non-profit organisations. Conference participants usually get fed and watered at these sessions. But the Granada conference seems to be more organised on behalf of its commercial sponsors. Every day from 5 to 7 in the evenings there are sponsored sessions. Some of the speakers are corporate executives. Others are nutrition scientists, some of whom are distinguished, and some are or have been officers of learned societies.

The *WN* Big Food Watch team will be asking scientists presenting at sponsored sessions whether they see any problems and if so what these are, and whether they

see benefits in working with industry and if so to specify these. We will publish a selection of replies. Below are 9 examples from the total of 39 sponsored sessions featuring close to 250 people. Those mentioned here do not include session chairs. There is no suggestion that any of the scientists named have undisclosed conflicted or competing interests, and their decision to speak at sponsored sessions does of course not reflect on their ability or integrity. We look forward to receiving and publishing their own accounts.



BIG FOOD WATCH

Box 2

Granada. Sponsored sessions and speakers

This is a selection of 9 sessions of 39 and 18 speakers of around 200.

Coca-Cola
Physical activity
Steven Blair, Michael Pratt

General Mills
Food choices to avoid obesity
Antonia Trichopoulou, Arne Astrup

Danone
Yoghurt in nutrition
Andrew Prentice, Nicole Darmon

Mondelez (previously Kraft)
Satiety
John Blundell, Marion Hetherington

Puleva (supplements)
Omega-3 fatty acids and health
Ricardo Uauy, Richard Deckelbaum

Nestlé
Public-private partnerships
Zulfiqar Bhutto, Massimo Massi-Benedetti

Danone
Diet modelling
Andre Briend, Elaine Ferguson

Tate & Lyle
Emerging fibres
Joanne Slavin, Connie Weaver

Deoleo (olive oils)
Monounsaturated fatty acids and health
Dariush Mozaffarian, Francisco Perez Jimenez

*Anon. Big Food Watch. IUNS Granada conference. Scientific conference or Big Food trade fair? [Update]. World Nutrition August-September 2013, **4,** 7, 459-462*

Gut bacteria. Helicobacter pylor1
Bad actors can be good

Access June-July Michael Pollan on gut biota here



Left to right: Gut bacteria; Helicobacter pylori; microbiologist Martin Blaser of New York University. May 'bad actor' H.pylori protect against obesity?

Isabela Sattamini writes from Rio de Janeiro

In the last issue of *WN,* Michael Pollan pointed out that the bacteria on us and inside us, which we tend to think of as bad for our health, usually protect our health or else are harmless (1). In other *New York Times* articles, Michael Specter and also Kate Murray tell a more complex story (2,3). Some bacterial species that live in our intestinal tracts may in some contexts be harmful and in other contexts beneficial.

Thus *Helicobacter pylori*, which because of being a co-factor in stomach ulcers and (as shown more recently) stomach cancer, together with salt, is now generally seen as a 'bad actor', which preferably should be eliminated. But other scientists point to the evidence that *H. pylori* came out of Africa already resident in human guts, and suggest why. Martin Blaser, a professor of microbiology at New York University who has devoted much of his working life to the study of *H. pylori,* a restless intellect who, in addition to his medical duties, helped start the *Bellevue Literary Review*, asks how an organism as old as humans could survive if it caused nothing but harm. 'That isn't how evolution works', he says. '*H. pylori* is an ancestral component of humanity'. *See Box 1.*

Box 1

Gut bacteria: disappearing species

Extract from an article by Kate Murray in The New York Times. Overuse of antibiotics has led to the creation of drug-resistant bacteria — so-called superbugs. But now some researchers are exploring an equally unsettling possibility: Antibiotics may also be contributing to the increasing incidence of obesity.

Among those sounding the alarm is Martin Blaser at New York University. In a commentary in *Nature*, he asserted that antibiotics are permanently altering microbial flora of the human body, also known as the microbiome or microbiota, with serious health consequences.

The human gut in particular is home to billions of bacteria, but little is known about this hidden ecosystem. Take *Helicobacter pylori,* a bacterial species associated with an increased risk of ulcers and gastric cancer. Many doctors are quick to prescribe antibiotics to kill it even when the patient has no symptoms.

But Martin Blaser is more circumspect, arguing that *H. pylori* might not be such a bad actor after all. 'We're talking about a bug that's been in the human gut for at least 58,000 years', he says. 'There's probably a reason for that'.

His lab has since produced a stream of findings supporting his suspicion. With his colleagues he discovered, for instance, that the stomach behaves differently after a course of antibiotics eradicates resident *H. pylori.*

After a meal, levels of ghrelin, a hunger hormone secreted in the stomach, are supposed to fall. But in subjects without *H. pylori,* the amount of ghrelin in the bloodstream holds steady, in essence telling the brain to keep eating.

Moreover, mice in Martin Blaser's lab fed antibiotics in dosages similar to those given to children to treat ear and throat infections — enough to kill *H. pylori* in many patients — had marked increases in body fat even though their diets remained the same. (Indeed, farmers have long given antibiotics to livestock to promote weight gain without increasing caloric intake.)

These results dovetail with research by Peter Turnbaugh, a Harvard University geneticist, in collaboration with Jeffrey Gordon, a gastroenterologist at Washington University in St. Louis. They have found that the ratios of various bacteria in the guts of obese mice and obese humans were significantly different from those of lean controls, suggesting that altering the stomach's microbial balance with antibiotics might put patients at risk for gaining weight.

Wider use of antibiotics may be wreaking havoc far beyond that resulting from the loss of *H. pylori.* Martin Blaser says: 'We have so far focused on *H. pylori* because we have the diagnostic tests to detect it, but you could say that it is an indicator organism for what is probably a vast and disappearing microbiota, and increasing disease risk'.

The US National Institutes of Health shares his concern, awarding him a $US 6.5 million grant to investigate the role of the disappearing microbiota in the current obesity epidemic, and also allocating $115 million to fund the Human Microbiome Project, which proposes to identify microbes that reside on and within a healthy human being.

'You can think of it as the second human genome project, where we will sequence the genes of the tremendous diversity of bacteria that populate our bodies," said Julie Segre, senior investigator at NIH's Human Genome Research Institute. 'We will take samples from 200 healthy volunteers to get an idea of what is a normal, healthy microbiota'.

It's an ambitious project, given that bodily bacteria outnumber human cells 10 to 1. But researchers involved in the effort said advances in DNA sequencing technology make it an achievable goal. The effort is so far focusing only on microbes on the skin and in the nose, mouth, gut and genital area.

David Relman, professor of microbiology and immunology at Stanford University, California, says the Human Microbiome Project is important because it's not just antibiotics that are changing the human microbiota: 'Many aspects of modern life, including diet, smaller families, more hygienic practices and improved public sanitation, are affecting our bacterial communities'.

Getting a genetic snapshot of bacteria populating humans today would provide a benchmark for tracking further degradation and resulting disorders. 'We need to get an understanding of how our microbial communities operate and what to feed them so they will bloom again' he says. 'It's entirely possible that in the future we will get a cocktail of strains and species of bacteria to repair the collateral damage that antibiotics and other practices have done to our inner ecology'.

Martin Blaser is gratified by the gathering interest in the human microbiome and its links to health. 'I know I am now doing the most important work of my career' he says.

The more research that is done on gut bacteria, the more evidence emerges of their benefits to human health. It is well-known now that 'friendly flora' produce vitamins, protect immunity and help digestion. There is also evidence that destruction of gut bacteria usually by use of or exposure to antibiotics, may be a factor in Crohn's disease, asthma, and obesity. (Again, see Box 1). In the US, after the Human Genome Project, the National Institutes of Health launched the Human Biome Project, to understand what Michael Pollan calls 'our second genome'. Seen like this the human body is itself a complex ecosystem.

Benign medicine may become seen as a kind of cultivation of our resident bacteria, as if crops in a farm. Bacteria may be introduced into a sick gut to heal its disease. Michael Specter tells the story of a man who suffered from ear pain, and tried every medicine including antibiotics, but nothing worked. Then he cured himself, simply by placing some ear wax from his healthy ear into his sick ear – the pain disappeared the next day!

All this is relevant to nutrition. Thus, *H. pylori* becomes a 'bad actor' usually only when consumption of salt is high, as it typically is when diets contain a lot of salt, or salted or salty food products. Feeding our friendly flora is also a matter of preferring fresh vegetables and fruits and whole grains. The implication is that nutritional recommendations need to include foods that improve the health of the bacterial species with which we have evolved.

Sattamini I. Gut bacteria: Helicobacter pylori. Bad actors can be good. [Update].
World Nutrition August-September 2013, ***4,*** *7, 463-465*

How to respond

Updates are short communications designed to add new information to *WN* commentaries and other contributions. They are invited from all readers. We pay special attention to issues in less resourced countries and settings. Updates can be to *WN* commentaries and other contributions published at any time. Usual length for main text of *Updates* is between 250 and 1,000 words but they can be longer. Any references should usually be limited to up to 10. *Updates* are edited for length and style, may be developed, and once edited are sent to authors for approval. Address contributions for publication to wn.updates@gmail.com