

Newsletter on Food Contamination

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DINACAI counts with a Health Alert unit, in which the most relevant information regarding food contamination is compiled.

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This edition's quote : "While man pulls himself from nature progressively loses his health" (Manuel Lazaeta)

July , 2011

German authorities declared an end to the E.Coli outbreak.

The outbreak of the bacteria E.Coli that caused the death to 50 people is officially over, as declared by the Robert Kock Institute. The organism assures that in the last 3 weeks no cases have been detected.

"The greatest outbreak of E.Coli in Germany is over", announced by the president of the Robert Kock institute, Reinhard Burger. This organism said they closed down the operation center in charge of observation on the outbreak, also said they will continue to observe the situation with most care if the pathogen reemerges.



Content :

-Most relevant news regarding food contamination.

-Debates

-Social

Senasa detected bacteria in chicken patties

The National Animal health Service (SENASA) from Costa Rica detected the bacteria "Listeria monocytogenes" in a shipment coming from Guatemala with chicken patties. This bacteria can cause serious problems, especially in children and pregnant women according to Senasa, a branch of the Ministry of Agriculture and Livestock.(MAG)

However, by the time present there are no reports associated with the consume of this product said the government entity.



New allergen in tomatoes is identified

A new allergen unknown until now, who is present in tomato skins has been identified by a research team from Spain.

In the study, DNA extracted from potato skins was tested using a pool of serum from individuals sensitive to tomatoes. From the data acquired, the research team could identify sequences of allergens that cause reactions of sensitization..

This way, the new allergen was identified, it contains 34 amino-acids in the C terminal región of the acidic ribosomal protein 60S. Also it was determined that the acidic ribosomal protein 60S shows a 85% homology (similarity) with fungal allergens.



Clenbuterol reports 12 poisoned in GUADALAJARA, MEXICO



The group of people most affected were between the ages of 4 to 24, followed by people age 25 to 44, only one case of a child of 4 years. All affected are in good health. Despite the outbreak , the official states that the population can continue to eat cow liver (beef), but said that the product should be purchased at certified stores. He also listed a number of benefits when eating cow liver, such as Vitamin A, Folic Acid and Proteins.

¿ What is Clenbuterol ?

Clenbuterol is defined as an agonist of adrenergic receptors, frequently used as a bronchodilator in the treatment of bronchial asthma, asthmatic bronchitis and spastic bronchitis. Acts after binding to these receptors and causes reactions in the organism getting relaxation of the bronchial muscles and promotes breathing. The recommended dose for a human health is 10 to 20 mcg (micrograms) twice daily.



99 people ill in the outbreak of Salmonellosis associated to the consumption of papaya

The FDA is warning consumers to do not eat Papayas sold by Agromod Produce Inc., a McAllen, Texas distributor.

- The FDA and the CDC (Centers for Disease Control and Prevention) 27 reported cases of *Salmonella Agona* are being investigated in relations to papaya consumption, and including 10 hospitalizations in 23 states.

- Agromod Produce Inc, voluntarily withdrew from the market all papayas after the FDA detected that the same strain of *Salmonella* were in the papayas.



The elderly; infants and those with compromise immune systems are more likely to suffer from the result of *Salmonella* infection.

The outbreak started in January with the first cases and continued through mid July. The state of Texas is the most affected with 25 reported infections by the outbreak.

What are the symptoms of the disease/infection ?

The most part of the people infected with *Salmonella* developed diarrhea, fever and abdominal cramps for 12 to 72 hours after infection by *Salmonella*. The disease lasts 4 to 7 days, and most of the people infected recover without treatment

The *Salmonella* infection can spread itself through the intestines to the bloodstream and then migrate to other parts of the body. The disease can cause death if not treated with antibiotic treatment.

Nestlé recalls Baby Food from France elaborated in Spain.

The multinational Nestle has recalled from France's market a batch of baby food manufactured at a plant in Sevares (Asturias) by the

“ possible presence of glass pieces ”. Its a total of 34,000 units of banana baby food marketed under the name of “P'tit Pot recette banane” with the consumption limit date of October 2012, clarified the multinational.

The multinational insists that the product is sold exclusively in France, so no other market will be affected.



More victims along the U.S. and Mexico border by the Guillain-Barré síndrome

In the town of Sonora increased to 18 the number of confirmed cases of Guillain-Barré síndrome, according to data provided by the health sector, informed local Mayor, Manuel Baldenebro Arredondo.

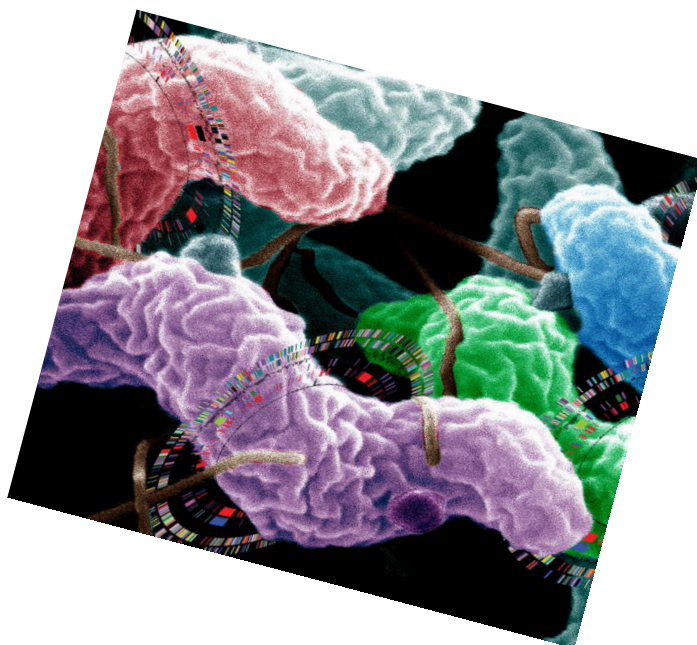
The Mexican Social Security Institute (IMSS) informed that the campaign to prevent more patients registering with the disease continues. This disease is a disorder that attacks the immune system and part of the peripheral nervous system. Today the number of people diagnosed with Guillain-Barré syndrome has risen. Health officials both in the U.S. and Mexico have been researching this disease and they believe that this rare disorder may have been caused by infection with *Campylobacter*, a common diarrhea disease transmitted by food characterized by diarrhea (often bloody) abdominal pain, malaise, fever, nausea and vomiting. Guillain-Barré often occurs when a person has had symptoms of a respiratory infection and gastrointestinal viral or bacterial, in fact two thirds of the people affected has had an infection caused by *Campylobacter jejuni* is the most common pathogen that causes Guillain-Barré síndrome.

In recent studies has been confirmed that patients with this disease have acquired the **Campylobacter**. Studies are being realized rapidly to determine the source of the **Campylobacter** infections.



What is the Campylobacter ?

Campylobacter is a genus that belongs to the family of Campylobacteraceae. The species of this genus are bacillus Gram negative with comma shape and mobile by the presence of one or two polar flagella. They measure between 0.5 and 5 microns long to 0.5 in width taking form of coccoid in old crops or prolonged exposure to air. It infects the gastrointestinal tract that is usually transmitted through contaminated food and water.



Did you Know ?..... That Avocado is a great fruit.



Avocado has a long history and heritage, since its discovery has come to be described as “poor ’s man butter” even “ the best of all fruits”

Benefits of eating Avocado

- Improves the metabolism
- Gives you a feeling of fullness
- Hydrates the skin and joints.
- Soothes the intestines and digestive system.

They are rich sources in 3 anti-oxidants, Vitamin C, Vitamin E and Beta Carotene.

Did you Know that ? Eating carrots and plums can increase your attractiveness ?

If beauty is a concern for you as attractiveness is too , how to make eyes direct towards to you can be easier than you think ¿How? Eating carrots and plums. This was the result of a research that highlights the value of a compound known as carotenoid, present in this two products.



A particular group of researchers from the University of Bristol and St. Andrews in the United Kingdom, found that people who eat carrots and plums frequently improve their skin and look healthier in a short period of time: is estimated that only two months are necessary to see results.



Banned antibiotics are discovered in Shrimp.

European researchers that studied the presence of antibiotic residues not allowed in freshwater jumbo shrimp (*Macrobrachium Rosenbergii*) from Bangladesh determined that this semicarbazide is naturally present in this type of crustaceans. This semicarbazide (SEM) is a prohibited veterinarian drug (nitrofurazone), it was mainly detected in



all the animals shell's that were studied, like crabs, shrimp and jumbo shrimp. Researchers from the University of Ghent and the Institute of Bio-science and Agro Food from Belfast conducted their studies separately. The research revealed negative results which came to report 50 alerts by the Rapid Alert System for Food and Feed (RASFF) of the U.E. in 2009. The results from this studies were presented at a symposium realized in Belgium. As part of this event, representatives from the government of Belgium and the private sector; they shared their efforts to establish an Association Public-Private to improve regulation and control the use of veterinarian drugs. Their actions included the implementation of a new legislation, that with improvements is looking increase the laboratory capacity for analysis, with the creation of a traceability program from the farm to export and the development of an Institute of Education to the aquaculture, supported by the FDA and the UE. The Center for Aquaculture and Health Center for Aquatic Food –AAFSC-, should ensure food safety in a long term period in Bangladesh.

<http://www.agromeat.com/index.php?idNews=118718>

Staphylococcus aureus in meat in the U.S.

A study realized in the U.S, were 136 samples of beef in 26 supermarkets in the States of Illinois, Florida, California, Arizona and Washington DC, founded high levels of the bacteria *Staphylococcus aureus* resilient to various types of antibiotics.

According to the study director, Dr. Lance Price, this bacteria causes thousands of infections every year in the U.S, infections that vary from small skin alterations even serious respiratory infections.

The study revealed that 96% of the samples that had *Staphylococcus aureus* contains a strain resilient to at least one type of antibiotic and 52% was resilient to three or more types of antibiotics.



Turkey meat presented a higher frequency containing bacterias resilient to three or more antibiotics followed by the pig, cow and chicken.

The FAO officially declares that rinder pest is eradicated from the world.

On June 28th, FAO adopted a resolution declaring the world free of Rinder Pest

This from that pose f - pro-
 system of emergency of transnational



is a milestone in history that the first animal disease has been eradicated its natural habitat, thanks to the human efforts and the international cooperation. We must remember that this is the second disease of any type has been eradicated, since the small pox in humans. The rinder pest is sibly the most dangerous animal virus in history. Through decades of forts to eliminate this transnational disease, countries and institutions agreed that it was necessary coordinate efforts under a single cohesive gram. The eradication program for rinder pest is part of a prevention system of emergency of transnational plagues and disease from animals and plants.(EMPRES) from FAO.

Fuente: <http://www.fao.org/about/features/70551/es/>

Early detection of Pathogens.

A new molecular system that allows early detection of Pathogens.

A good way to improve de quality of life in relation with food transmitted diseases, is the detection of possible risk before people get affected. To this end, a group of experts of the University of Milan, in collaboration with the Autonomous University of Barcelona (UAB) in Spain, they have devised early detection system for contaminated food, through a DNA analyzing process. This system allows to indentify pathogens in food like *E.coli* or *Clostridium botulinum* before they get to the final consumer and that way reduce the number of intoxications.

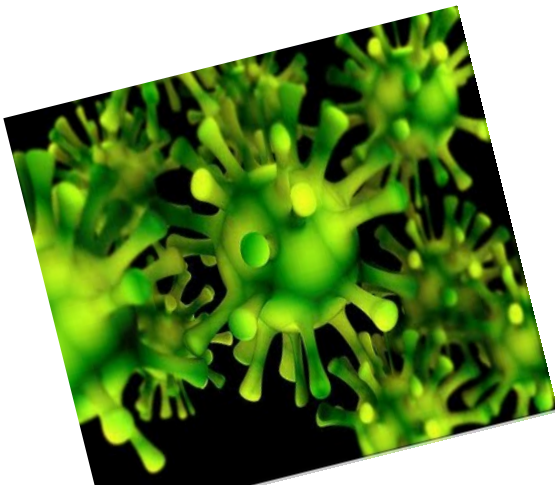
The application of molecular biological techniques and genetic engineering in the field of food, has assumed in the last few years breakthroughs that have allowed to increase the levels of security.

Molecular diagnostic system of pathogens, that have stage an important breakthrough in the last ten years, have particularities, such as high sensibility, specificity and speed. This features allowed to distinguish the microbial strains that can alter foods DNA

sequences, also allows con understand micro-organisms at a molecu-

lar scale. In animal health, this techniques are used above all for de diagnose of infectious agents, toxins or parasites.

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Topic of discussion in this edition

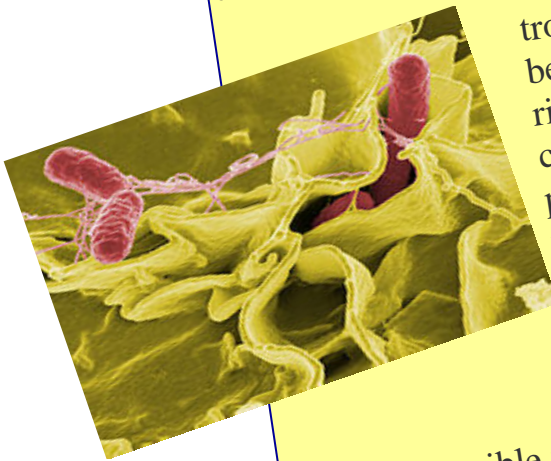
A vaccine with the bacteria *Salmonella* could prevent cancer.

An international research done by Italian and American scientist reveals that a treatment of some cancer tumors with salmonella, favors the immune system response. Their conclusions state that this microorganism helps the immune system to detect cancer cells and eliminate them, this discovery could become a long term focus of a preventive strategy against cancer.



In conducting the research, published in the journal "science Translational medicine", mice with cancer and human cells with melanoma were inoculated with salmonella, modified to avoid massive reproduction, that could originate in salmonellosis. They found that if they elevate the quantity of "Connexin 43", the protein "link" between the protective cells, the result is that the immune particles activate and eliminate cancer cells. The researchers explain that, at the beginning of the illness,

human cells recognize the malignant ones and destroy them, but as cancer progresses, intrusive cells become invisible" to the immune system, they clarify it is due to a failure in the immune system communication, produced by the descent of the protein "Connexin 43", that favors the communication between defensive cells and activates the alert system. First experiments were done with mice, then with cancer cells and immunologicals from human patients, it was found that exactly the same work in both samples, says Maria Rescigno, one of those responsible for the study. They discovered that this technique also blocked cancer cells from spreading in mice. "Now we are ready for human testing" assured Rescigno.



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¿ Aflotoxins in Indian spices ?

The experts of the Food and Veterinarian Office found the lack of control in Indian producers.

The spices sector of India has done a recall after the UE inspectors found a series of deficiencies in safety procedures to prevent contamination by aflatoxins, means that authorized exportations by officials may not reach export levels. The experts from the Food and Veterinarian Office (OAV) registered the deficiencies after conducting a visit to India for 10 days, after an increase of notifications for aflotoxins in spite of the Rapid Alert System for Food and Feed (RASFF) in the last few years. The legal requirements for control of aflotoxin cover only four of six species for export included in the CE regulations.



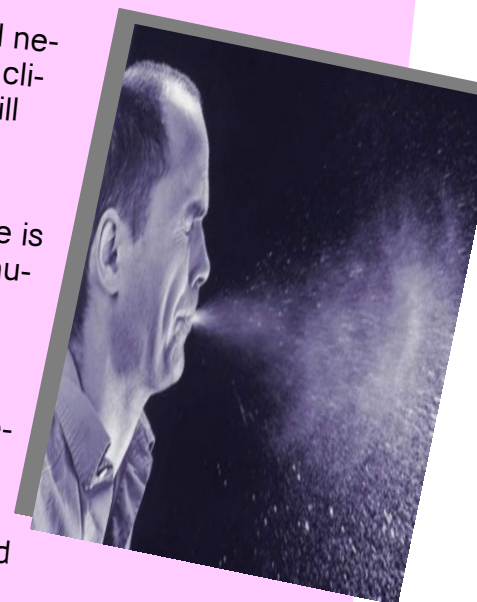
<http://www.foodqualitynews.com>

Aflotoxins are microtoxins produced by many species of the genus *Aspergillus*, the most notable are *Aspergillus flavus*, *Aspergillus niger* and *Aspergillus parasiticus*. They can also be produced by fungus from the genus *Penicillium*, like *P. verrucosum*. After making entry into the body, the aflotoxins are metabolized by the liver

Did you know? There are ways to improve your immune system naturally.

In our country were in the months of winter, so probably we will all need a good functioning of our immune system, to prevent what this climate brings with him like coughing and colds. In this articles we will see ways to improve the immune system.

- **Drink green tea**, It has been proved that is beneficial because is filled with antioxidants that helps the body to keep a good immune system.
- **Vitamina C**. Wether in the form of supplements, pills, oranges, tangerines, they always have Vitamin C with you, to ingest everyday.
- **Codfish oil**. This type of oil has a great content of Vitamin A and D.

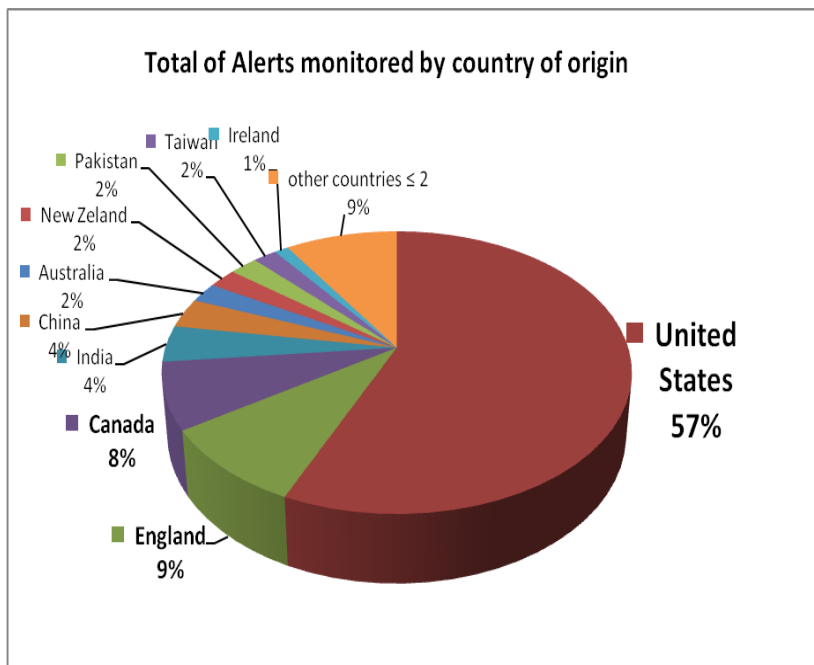


INTERNATIONAL FOOD CONTAMINATION ALERTS

During the first half of 2011 in the National Analysis and Control of Imported Food (DINACAI), monitored by staff : in the health news alerts worldwide a total of 263 official alerts, from which 97 were caused by microbiological contaminants and 166 were from physicochemical contaminants.

AUPSA has categorized food in low, medium and high risk levels, based on the type of contaminant, which are governed by regulations that could be national or international, monitoring the degree of impact the can cause in local commerce, taking into consideration the categorization above. Worth noting that, from all alerts received, 99.9% represent a low level risk, meanwhile 9.1% represents a medium level risk, based upon similarities with the manufacturer's name among the products impacted by the alert and products registered in AUPSA, taking in consideration the type of contaminant; this according risk assessment done by the scientific staff in DINACAI.

Country	Nº of Reports	Percentage (%)
United States	149	57
England	24	9
Canadá	20	8
India	11	4
China	9	4
Australia	6	2
New Zeland	6	2
Pakistán	6	2
Taiwán	5	2
Irland	3	1
Othe countries ≤ 2	24	9
TOTAL	263	100



From the total of all alerts intercepted by DINACAI through the different international agencies, reveals that the country with the most food contamination reports is the U.S, with an estimate of 57% total. On the other hand , followed by England with a 9% and Canada with 8%.

International Health Alerts

Most reports regarding the type of contaminant are: Allergenic substances with a total of 117 (44.5%), mainly in association with meat products. As for detection of contaminants reports show: Salmonella with a total of 44(16.7%), were involves fruits, vegetables and meat. Also it has been detected Listeria monocytogenes in 31 (11.8) alerts, involving dairy products, fish products and meat mainly.

Monitor alerts summary - First half of 2011

		Months						TOTAL
		JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
Biological Contaminants	Unspecified bacteria		1			1		2
	Clostridium	2	2	2	1			7
	E. coli	1	1	2	1	2		7
	Fungus			2		1		3
	Listeria monocytogenes	6	1	5	4	9	6	31
	Salmonella	6	5	9	7	16	1	44
	Staphylococcus aureus	1		1			1	3
Chemical contaminants	Allergens	22	18	13	26	20	18	117
	Dioxines	1						1
	Alkaline Phosphatate			1				1
	Monosodium Glutamate	1	1					2
	Histamine	2	2					4
	Stange Matter	3	5	2	5	1		16
	Veterinary Drugs	1			1			2
	Micotoxines	2						2
	Sodium Nitrate					1		1
	Nitrite			1				1
	Lead	3		3	1			7
	Inadequate Production	4	2	1	3	1		11
	DSP Toxine					1		1
	TOTAL	55	38	42	49	53	26	263

This Edition's Advice

Not drinkin enough water can cause kidney problems, intestinal and circulatory.

Experts recommend to drink an average of two to three liters of water daily. That amount is higher in athletes, people who suffer from certain ailments such as heartburn or wishing to loose weight. But regardless the state of health of a person and the exercise that practice, drinking water-staying well hydrated is one of the pillars of good health. It is essential for the organism to function properly, without water there is no life.

Drinking enough water every day ensures the proper functioning of the waste disposal process of the body. "An Adult depending of sweat loss, need between 20 to 40 milliliters per kilogram daily.



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The following report has received contributions of graduates : Karla López, Irma Ortiz, Rolando García, Gerardo Espinoza.

*On a table well served there is no lack of love
neither the perfume of a holy blessing".
Anónimo.*

