



## Seismo Info 01/2023



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The FSVO compiles the most important food safety information every month:

[FSVO website](#)

★★★★ very important info   ★★★ important info   ★ interesting info

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### Microbiology

★★★★ ***Helicobacter pylori* in raw and ready-to-eat meat:** *Helicobacter pylori*, classified as a **class-I carcinogen**, is one of the leading medical pathogens of global concern associated mainly with the development of gastric adenocarcinomas and gastric mucosa-associated lymphoid tissue lymphomas; nevertheless, its prevalence in food especially meat and meat products is not fully covered. A study investigated the **prevalence, molecular characterization, and antimicrobial resistance** profiles of clarithromycin-, and metronidazole-resistant *H. pylori* isolated from raw and ready-to-eat meat samples retailed in Mansoura city, Egypt. The results showed a **widespread contamination of examined raw and ready-to-eat meat** product samples with multidrug-resistant *H. pylori* isolates, which could constitute a **tremendous public health hazard**. [IntJFoodMicr](#), 47 pages. (08.12.2022).

★★★★ **Alongshan-Virus (ALSV) in Swiss ticks:** The Alongshan virus was only discovered in **China in 2017**. Now researchers at the University of Zurich have detected the new virus in **Swiss ticks** for the first time. It seems to be at least as **widespread** as the early summer meningoencephalitis virus (TBE) and leads to similar symptoms. At present a possible transmission also via **milk**, like TBE, is not known. [UZH News](#), 1 page. (07.12.2022). Original Publication: [Zenodo](#).

★★★★ **Extraintestinal pathogenic *E. coli* isolated from plant-origin foods:** A study systematically examines the diverse **plant-origin foods** such as cucumber, carrot, tomato, radish, chilli, fenugreek, coriander, peppermint, spring onion, cabbage, and spinach for the **presence of *Escherichia coli* (ExPEC)** or specific putative ExPEC pathotypes with an in-depth assessment of their phylogenetics, virulence, and drug resistance. **77 (15 %) putative ExPEC pathotypes** were found in plant-origin foods. All putative ExPEC pathotypes exhibited **100 % multidrug resistance**. [IntJFoodMicr](#), (02.2023).

★★★ **Antibiotic resistant lactic acid bacteria in fermented food:** A study conducted in Malaysia on home-made and manufactured **fermented foods and beverages** found a high number of **multidrug resistant lactic acid bacteria (LAB)** strains. It demonstrated an increasing **antibiotic resistance** in LAB which could pose a threat to human health, thus signifying the need to monitor the antibiotic resistance pattern of LAB in the fermented food industries. [FoodContr](#), 5 pages. (10.12.2022).

★★ **Cucumbers linked to multi-country *Salmonella* outbreak:** A *Salmonella* **outbreak** in Norway, Sweden, and the Netherlands has been linked to **contaminated cucumbers from Spain**. The Norwegian Institute of Public Health (FHI) said **72 people are sick** in the *Salmonella* Agona outbreak and 24 have been hospitalized. [FSN](#), 3 pages. (21.12.2022). Additional Information: [OutbreakNewsToday](#).

★★ **Persistent *Listeria monocytogenes* strains in food environments:** Specific *Listeria monocytogenes* (*Lm*) genotypes are adapted to **meat and dairy processing environments**. Genome analysis identified slaughterhouse as a *Lm* contamination source for meat processing facilities. Several events of *Lm* **persistence** over four years were identified in food processing facilities in **Italy**. Persistence seems not to be related to specific *Lm* genotypes. [IntJFoodMicr](#), 10 pages. (02.2023).

★★ **Outbreak in the UK due to imported melons revealed:** In July and August 2021, there was an outbreak of 17 cases of **Shiga toxin-producing *Escherichia coli* (STEC) O157:H7** in the UK. Analysis now show that this outbreak was linked to **precut watermelon** sourced from Europe. [FSN](#), 2 pages. (06.01.2023). Original Publication: [JFodProt](#).

★★ **Fiber-based food packaging materials in view of bacterial growth and survival capacities:** A study conducted by the Medical University of Graz evaluated **food contaminating species** microbial growth and survival in **packaging materials** with different fiber types. They found that **growth and survival were strongest** for the packaging material entirely made of **recycled fibers**. [FrontMicr](#), (09.01.2023).

★ **Antimicrobial phage spray:** Researchers have developed a new, highly effective tool to **mitigate bacterial contamination** of foods, including pathogens displaying antimicrobial resistance (AMR). The technology involves the application of **bacteriophages** (phages) to goods in the form of microgels. [FoodSafetyMag](#), 1 page. (09.12.2022). Original Publication: [NatureComm](#).

★ **Mycotoxins in wheat: a growing food safety threat across Europe:** Wheat in Europe is under growing attack from **harmful mycotoxins**, according to a study from the University of Bath. Almost **half of European wheat crops** are impacted by ***Fusarium* Head Blight**, a fungal infection that gives rise to the toxins. The researchers suspect that **changes in farming**, such as soil preservation practices that provide a home for the *Fusarium* fungus, and **climate change** are playing an important role in the increasing levels of mycotoxins in wheat. The researchers stress the importance of the development of better ways to protect crops against fungal pathogens. [FoodSafetyMag](#), 1 page. (20.12.2022). Original Publication: [NatureFood](#).

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## Chemistry

★★★ **Nitrite-cured pork exacerbates colorectal cancer pathology:** A study by scientists from Queen's University Belfast found that **nitrite-containing sausages** may exacerbate the development of **Colorectal cancer (CRC)** pathology in mice to a greater extent than nitrite-free sausages. [TheGuardian](#), 2 pages. (27.12.2022). Original Publication: [npj Sci Food](#).

★★★ **Tire Wear Particle-derived compounds in lettuce:** Wind, sewage sludge, and waste water carry **tire wear particles (TWP)** from roads onto farmland and could get into the vegetables grown there. A new study conducted at the University of Vienna shows that **lettuce** took up all the TWP-compounds studied —some of them **highly toxic** — through their roots and accumulated them into their leaves. [Phys.org](#), 2 pages. (04.01.2023). Original Publication: [EnvSciTech](#).

★★★ **Arsenic-contaminated water and antibiotic resistance:** In rural Bangladesh, areas with high levels of **arsenic contamination in drinking water**, compared to areas with less contamination, have a **higher prevalence** of **antibiotic-resistant *Escherichia coli*** in both water and child stool samples, according to a new study. [EurekAlert](#), 2 pages. (08.12.2022). Original Publication: [PLOSPath](#).

★★★ **Baby spinach contaminated with *Solanum* sp.?:** Australia reports there are 47 people who have reported **symptoms** after eating **baby spinach**. At least 17 have sought medical attention. Reported symptoms can be severe, including: delirium or confusion, hallucinations, dilated pupils, rapid heartbeat, flushed face, blurred vision, dry mouth and skin and fever. A possibility is the **contamination** of the baby spinach of one of the many plants in the genus ***Solanum* sp.**, also known as the nightshades or the belladonna plants. [ProMed](#), 6 pages. (19.12.2022). Original Publication: [NSW](#).

★ **Grayanotoxin in honey from Nepal:** The Centre for Health Protection (CHP) of Hong Kong was investigating a case of **mad honey poisoning** after a patient consumed **home-made honey from Nepal**. Mad honey poisoning is caused by ingestion of honey containing **grayanotoxins** derived from plants belonging to the Ericaceae family, including **rhododendrons**. Grayanotoxins are **neurotoxins** which can affect nerves and muscles. [ProMed](#), 2 pages. (25.12.2022). Original Publication: [GoV HK](#).

★ **Lead and Cadmium in Dark Chocolate:** *Consumer Reports* in United States found **heavy metals in chocolate**. For 23 of the bars, eating just an ounce (approx. 28g) a day would put an adult over a level that public health authorities and CR's experts say may be harmful for at least one of those heavy metals. Five of the bars were above those levels for both **cadmium** and **lead**. [CR](#), 3 pages. (15.12.2022).

★ **Spices second in lead poisoning in children:** A Douglas County Health Department study determined that **contaminated spices** were to be the second largest cause of **lead poisoning in children** in 2021 in Nebraska's most populous county. [FSN](#), 2 pages. (10.01.2023).

★ **Lead concerns prompt human breast milk recall:** A brand of **human breast milk** products has been recalled in the United Kingdom because of the level of **lead**. The firm has withdrawn and recalled all products. However, most items are already out of date. The firm sold human breast milk to people **online**. [FSN](#), 1 page. (10.01.2022).

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## Nutrition

★★★ **Nutritional quality of vegetarian meat substitutes:** The availability of **foods based on plant proteins** to substitute for meat has increased dramatically as more people choose a plant-based diet. At the same time, there are many challenges regarding the **nutritional value** of these products. A study now shows that many of the meat substitutes sold in Sweden claim a high content of **iron** – but in a form that **cannot be absorbed by the body**. [EurekAlert](#), 2 pages. (08.12.2022). Original Publication: [Nutrients](#).

★★★ **Consumption of fast food linked to liver disease:** A study from Keck Medicine of University of Southern California found that eating **fast food** is associated with **nonalcoholic fatty liver disease**, a potentially life-threatening condition in which fat builds up in the liver. People with obesity or diabetes who consume 20% or more of their daily calories from fast food have severely elevated levels of fat in their liver. [EurekAlert](#), 2 pages. (10.01.2023).

★★★ **Polymer encapsulation of vitamins:** American researchers have developed a new way to **fortify foods with vitamin A**. In a new study, they showed that encapsulating vitamin A in a **protective polymer** prevents the nutrient from being broken down during cooking or storage. [EurekAlert](#), 2 pages. (12.12.2022).

★ **Aspartame and anxiety:** American researchers have linked **aspartame**, an artificial sweetener found in nearly 5,000 diet foods and drinks, to **anxiety-like behavior in mice**. Along with producing anxiety in the mice who consumed aspartame, the effects extended up to two generations from the males exposed to the sweetener. [EurekAlert](#), 2 pages. (08.12.2022). Original Publication: [ProceedingsNatAcSc](#).

★ **Vitamin D deficiency increases risk of losing muscle strength:** Vitamin D plays an important role in the **regulation of calcium and phosphorus absorption** by the organism. It also helps keep the brain and immune system working. Researchers have now shown that **vitamin D supplementation reduces the risk of dynapenia** (an age-associated loss of muscle strength) in older people by 78%. [EurekAlert](#), 2 pages. (13.12.2022). Original Publication: [CalcTisInt](#).

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## Allergy

★ **Milk causes most food allergen recalls in UK:** A recent study **analyzing recalls in the UK** from 2016–2021 has revealed allergens to be the most prevalent cause, and **milk** to be the most commonly implicated allergen. [Food-SafetyMag](#), 2 pages. (05.01.2023). Original Publication: [FoodContr](#).

★ **Precautionary Allergen Labelling: lack of legislation:** There is **no EU legislation** about **Precautionary Allergen Labelling (PAL)** for **unintended allergen presence (UAP)**. As a result, PAL is used in different ways by different manufacturers and retailers, which **hampers consumers' interpretation** of the information in the PAL. [FoodContr](#), 20 pages. (21.12.2022).

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## Fraud / Deception

★★★ **Basmati rice: new authenticity rules:** A huge number of newly cultivated varieties of **Basmati rice** have been permitted in the UK and EU since 2017, and some have turned out to be **sub-standard**, lacking the unique popcorn-like fragrance that helps to make this rice so sought after. New rules are being introduced at the beginning of 2023 that aim to take these lesser varieties of basmati **off the market**. [Conversation](#), 2 pages. (29.12.2022).

★★ **Bamboo powder in food contact material:** The European Union recently acted against two major cases of food fraud: amongst them, **food contact materials** containing **bamboo powder**. Over the course of one year, 21 countries participated in the project. In total, **748 cases** of plastic food contact materials containing the illegal additive bamboo powder were notified. A majority of the illegal products were found to have originated in China. [FoodNavigator](#), 2 pages. (13.12.2022). Original Publication: [EU COM](#).

★ **Australia: change to food irradiation rules?:** An application has been made to amend **food irradiation** rules in Australia. The proposal seeks to **increase the maximum permitted energy level** of machines generating X-rays for irradiating food from 5 to 7.5 megaelectronvolts (MeV). The assessment will not start until **October 2023**. Fresh produce except dried pulses, legumes, nuts and seeds can be treated with irradiation to kill pathogens that cause food-borne illnesses. [FSN](#), 2 pages. (02.01.2023).

★ **Fresh beef sample found to contain sulphur dioxide:** The Centre for Food Safety (CFS) of the Food and Environmental Hygiene Department (Hong Kong) announced that a **fresh beef sample** was found to contain **sulphur dioxide** (766 parts per million), a **preservative** which is **not permitted** to be used in fresh meat. [CFS](#), 2 pages. (09.01.2023).

★ **Economic adulteration in honey:** The FDA has released data on **economic adulteration in honey**, from an assignment that was carried out in 2021 and 2022. The agency collected and tested 144 samples of imported honey from bulk and retail shipments from 32 countries. The FDA found 14 samples (10%) to be violative. [FPB](#), 1 page. (04.01.2023). Original Publication: [FDA](#).

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