

Food safety authority says aspartame not linked to cancer

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It was an unusual opening gambit for the director of the European food safety authority, but Dr Herman Koéter wanted to tackle the persistent controversy that has swirled around the artificial sweetener aspartame head on.

His expert scientists were gathered at a press conference in Rome ten days ago to give their latest opinion on whether the sweetener causes cancer. Aspartame is eaten every day by millions of people around the world in over 6,000 well-known brands of food, drink and medicine. Any review of its safety has enormous political and economic implications.

The latest episode in the drama began a few months ago when Italy's independent Ramazzini Foundation published a new and exceptionally large study, which said that aspartame caused several types of cancer in rats at doses very close to the current acceptable daily intake for humans. Dr Koéter commissioned an urgent reassessment of aspartame. It was the first big test for the recently-formed authority, which has already lost its first director and 10% of its staff. Over 1,000 people were waiting for the webcast of its judgment on the Italian research.

But first, Dr Koéter said, he wanted to clear up misunderstandings about "conflicts of interest" among his advisory panel overseeing the review.

MEPs complained last month that the scientist who chairs the advisory panel, Dr Susan Barlow, works for the International Life Sciences Institute, a body funded by sweetener manufacturers and major aspartame users such as Coca Cola, PepsiCo and Nestlé, and Monsanto. The European commission was also told by MEPs of other "conflicts of interest". One scientist involved in the review had declared a research grant from Ajinomoto, the leading Japanese manufacturer of aspartame, they said. Other panel members listed links with food processors such as Nestlé in their declarations of interest.

But to say that these scientists therefore have a conflict of interest was a misunderstanding, Dr Koéter explained to the Rome conference. "The expertise required [to judge any new study on whether aspartame causes cancer] almost inevitably means having a previous involvement." Eliminate the scientists who had worked in the area before or who had worked for industry and there would be no scientists left, he said. The panel had been "fully impartial".

Its members had no direct or indirect interest in the particular issue of aspartame. Dr Barlow's work for industry had been generic and had not related to sweeteners. The research grant from Ajinomoto related to a student project on flavourings, not sweeteners.

Then the news that the press conference had been waiting for was delivered. The European food safety authority (EFSA) reconfirmed that aspartame was safe. Having reviewed the new Italian study, its scientific experts decided that it had a number of flaws that undermined the validity of its findings.

The panel therefore concluded: "There was no need to further review the safety of aspartame nor to revise the previously established acceptable daily intake for aspartame."

The British food standards agency immediately welcomed the judgment, which it said raised similar concerns about the Italian study to those expressed by the UK's independent expert advisory group, the committee on carcinogenicity. Three experts at its meeting to consider the new aspartame study made declarations of interest related to industry. Dr Barlow attended the meeting as an observer.

The industry says the review closes the book on the safety of aspartame. "The opinion from EFSA is completely consistent with the global scientific consensus that aspartame is safe. Extensive scientific research over decades and regulatory reviews conducted by numerous national and international food safety authorities, together with a history of more than 20 years of safe use, support the conclusion that aspartame

is safe," the Aspartame Information Service, an industry [website](#) says. We asked the AIS if it wished to make any further comment, but it said that the EFSA judgment spoke for itself.

The Ramazzini Foundation however is refusing to close the book on aspartame. Its director, Dr Morando Soffritti, told journalists at the Rome conference that it stands by its research finding that aspartame causes cancer. Roger Williams, the British Liberal Democrat MP who used a speech in the House of Commons last December to highlight the controversial history of aspartame's approval, has just announced that he will continue his campaign to have the sweetener banned. In his earlier parliamentary speech he said the licensing of aspartame put "regulators and politicians to shame", with the likes of Donald Rumsfeld, the US defence secretary and a former head of the Searle, the pharmaceutical company that discovered aspartame, "calling in his markers" to get it approved. Mr Williams has now accused EFSA's criticisms of the study of being "unfounded and contradictory".

The decision to reconfirm the safety of aspartame hinged on the complex details of the Italian study.

The foundation's work on the sweetener began over seven years ago. A not-for-profit cancer research organisation, it uses unorthodox methods in its testing. In the palatial surroundings of a 15th century castle near Bologna, it conducts "mega-experiments" on rats, in which thousands of animals are treated with suspected carcinogens until they die spontaneously, typically at around three years. The aspartame study involved over 1,800 rats fed a wide range of doses. Other studies typically use only 20-50 rats and sacrifice the animals after a fixed period, at about two years. EFSA's panel acknowledged that the new study "represented a substantial effort" but noted that the methods did not conform to internationally agreed protocols. The foundation argues that its method mirrors the human condition, since over 80% of cancer is diagnosed in people over the age of 55. Its previous studies using the same methods have led to major changes in international regulations several times. But EFSA said that lifetime studies have their own difficulties - animals are likely to suffer more background disease, for example. There may also be postmortem changes in the tissue samples before analysis of animals allowed to die in their own time rather than at a fixed point.

The expert panel's conclusions on the Ramazzini study revolved around three key areas: · The Italian researchers reported a significant dose-related increase in blood cancers known as lymphomas and leukaemias in the rats fed aspartame. EFSA scientists decided this finding could be attributed to a high incidence of lung inflammation and infections in the rats rather than to aspartame, and therefore could be dismissed. Dr Soffritti countered that both groups of animals, those treated with aspartame and the control group, had higher rates of inflammation because that is what happens in aging and dying animals, but the aspartame group had significantly more blood cancers.

· The study reported an increase in cancers of the kidney, urethra and bladder. EFSA decided that these were probably related to feeding the rats aspartame but felt they could be explained by imbalances in calcium metabolism, which were specific to the rat and therefore not relevant to humans. In response the Italian researchers say these cancers were found in rats where there was no problem of calcification.

· The Italians also found an increase in cancers of the peripheral nerves, which are very rare. This finding depended on diagnosis, according to the EFSA panel. It said there was uncertainty about diagnosis in one case and that the finding could only be evaluated if independent pathologists reviewed the laboratory slides. The Ramazzini researchers, who reported 16 cases of these types of cancers, say the US national toxicology programme had already given a second opinion on the diagnosis where there was any doubt.

The EFSA panel was unanimous in its decision that the Italian study on aspartame provides "no scientific basis for reconsidering its use in foods", according to Dr Koéter, but "if any new information becomes available in the future, EFSA will review these as a matter of priority" he said. Dr Soffritti meanwhile is half way through another mega experiment on aspartame and is about to start new on other widely used sweeteners such as sucralose, acesulfame K, and saccharin.

As the conference wound up, we asked the EFSA head if he himself ate aspartame. "Yes, I would. In chocolate, I would." Did that mean he does eat aspartame? "I don't drink aspartame in soft drinks, but that's because I don't like the taste."

He then revealed that he had worked on artificial sweeteners in the past. "Aspartame has an aftertaste, you know," he added.