BASF makes functional dental products with Lactobacillus

By Jess Halliday

21/08/2006 - German chemicals group BASF is set to expand the market for Lactobacillus healthy bacteria derived from yoghurt, with the introduction of a raft of products for dental health and personal hygiene.

Even though in most markets products containing so-called bacteria are not able to make health claims, they are best known for their probiotic properties associated with gut and immune health.

The developments at BASF Future Business, in collaboration with German biotech OrganoBalance, functional uses in new areas, and a product in the dental care category – which may be a chewing gum, toothpaste or a mouthwash – is expected to reach retail shelves sometime in 2007.

The two companies have been working together since 2002. While OrganoBalance is responsible for screening for suitable microorganism cultures from its extensive collection, BASF ferments them and carries out further processing and formulation and marketing in accordance with customers’ requirements.

They are jointly commercialising the resulting products, and BASF project leader Dr Andreas Reindl said: “Negotiations are currently in progress with various manufacturers.”

Details of which of the dental health candidates will be commercialised first are yet to be disclosed.

The dental health action is attributed to a Lactobacillus strain discovered by BASF, dubbed L anti-caries. It is said to bind to Streptococcus mutans, the bacteria that causes tooth decay by sticking to the surface of the teeth and producing an acid that erodes enamel.

"With L anti-caries we have found an antagonist which effectively binds to the caries germs and prevents them adhering to the surface of the teeth," said Reindl.

The team researching the potential of the chewing gum has reported finding that it can reduce the amount of S mutans bacteria in the mouth by as much as fifty times.

In the personal care sector, BASF is also investigating potential uses for Lactobacillus in deodorant products. The L ala-odoris strain has shown promise in inhibiting bacteria that cause armpit odour, and L pes-odoris in foot odour.

The companies say that there could also be potential for Lactobacillus strains in face and body creams, medicinal ointments and plasters; just like the gut, the surface of the skin is host to a delicate balance of good and bad bacteria. It this balance is disrupted, it can affect the appearance and health of the skin.

In this case, OrganoBalance found that L stimulans can speed the regeneration of protective microbial flora.

It took some time for consumers to be convinced of the rationale behind consuming bacteria in the form of probiotic drinks and yoghurts. But now the foundations have been laid, it is unlikely that the same levels of education will be required for the gum and personal care markets.

It is also not the first time that an anti-caries gum has been introduced to market. Evidence has indicated that gum containing Danisco’s artificial sweetener xylitol can also fight tooth decay.