

## PRESS RELEASE

### Healthier Food and Beverages

## **BRAIN AG expands Patent Protection for unique Taste Cell Technology to Europe**

- **Patent protects technology for the discovery of novel natural taste ingredients for food and beverages**
- **Research targets are sugar, fat and salt reduction as well as taste improvements**

BRAIN AG has been granted patent protection by the European Patent Office (EPO) for novel taste cell technologies (EP 2841565 B1 | Human taste cells capable of continuous proliferation). Thus, BRAIN AG holds the right to use the highly innovative screening technologies for novel natural taste modulators described in the patent in the notable markets of Europe and the United States. The European patent was granted and published on February 21, 2018. The corresponding patent for the US was already granted in August 2016.

Thanks to cell models which are based on human tongue cells and cultivated in vitro, researchers at BRAIN are now able to identify new ingredients for the formulation of low-calorie foods with a lower content of sugar, salt or fat at an early stage of the substance selection process. The technology allows for a qualitatively reliable and considerably faster sampling of natural substances than with test subjects in a sensory panel. In addition, the method results in a substantially higher throughput, and the selection step can be taken without submitting the natural substances to tolerability testing beforehand. The low material requirements also mean that it is possible to screen the smallest amounts of natural substances.

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Says Dr Jürgen Eck, CEO of BRAIN AG: "We already have successfully applied our technology in strategic industrial partnerships such as the DOLCE programme dedicated to the development of natural sugar substitutes and sweet taste enhancers. The expanded patent protection is an important step for the development and marketing of our offers of healthier foods to various partners from the food and beverages industry".

The BRAIN group's research and development activities in the "Bioactive Compounds" product category are, among other things, aimed at providing new natural ingredients for healthier foods that do not entail any loss of quality regarding sense of taste or eating experience. Therefore, BRAIN researchers not only focus on sugar substitutes, but also devote themselves to reducing the amount of salt and fat in food, the excessive consumption of which also harbours health risks. In addition, their activities are addressed at attenuating and concealing the off-taste of calorie- or salt-reduced products which often occurs as an undesired side effect when food formulations are altered.

Within the framework of the "Natural Life Excellence Network 2020" strategic innovation alliance (NatLifE 2020), which is co-ordinated by BRAIN and supported by the Federal Ministry of Education and Research (BMBF), BRAIN and Martin Luther University at Halle-Wittenberg (MLU) researched the link between sugar consumption and the prevalence of dental decay, parodontitis and the loss of teeth last year. The study shows that globally accrued dental treatment costs due to excessive sugar consumption amount to USD 172 billion annually.

Accordingly, initiatives such as NatLifE 2020 have been created at a political level in order to support the development and production of healthier foods. Other countries already have introduced levies on high-caloric products or on foods with a high salt content. Most recently, the UK government announced plans to establish a "sugar tax" at some point in 2018. Against this backdrop, it can be assumed

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that demand for healthier foods and natural ingredients which improve the flavour profile of foods will increase further.

## Further Information

- EPA | EP 2841565 B1: <https://register.epo.org/application?number=EP13727056&tab=main>
- Scientific study proves high dental treatment costs due to excessive sugar consumption. Press Release, August 15, 2017 (<https://www.brain-biotech.de/en/press/20170815-dental-treatment-costs>)
- Global Beverage Company has joined DOLE. Press Release, July 12, 2017 (<https://www.brain-biotech.de/en/press/globaler-getraenkekonzern-tritt-dolce-bei>)
- BRAIN granted key patent in the United States. Press Release, August 03, 2016 (<https://www.brain-biotech.de/en/press/brain-erhaelt-schluessepatent-in-den-vereinigten-staaten>)

## **About BRAIN**

B.R.A.I.N. Biotechnology Research and Information Network AG (BRAIN AG; ISIN DE0005203947 / WKN 520394) is one of Europe's leading technology companies in the field of industrial biotechnology, the core discipline of Bioeconomy. As such, BRAIN identifies previously untapped, efficient enzymes, microbial producer organisms or natural substances from complex biological systems that can be put to industrial use. The innovative solutions and products developed by help of this "Toolbox of Nature" are successfully applied in the chemistry, the cosmetics and the food industries. BRAIN's business model is based on two pillars - BioScience and BioIndustrial. The BioScience comprises its frequently exclusive collaboration business with industrial partners. BioIndustrial comprises the development and commercialization of BRAIN's own products and active product components. Further information is available at [www.brain-biotech.de/en](http://www.brain-biotech.de/en).

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