

FIVE-YEAR STRATEGY:

Research and development



Malodour counteraction

Our receptor research is helping to define how the human sense of smell works. Humans use about 400 different olfactory receptors, whose genes and protein structures are known, but the odorants which activate individual receptors have, until now, only been established for a small number.

High throughput screening by TecnoScent™ of up to 500 fragrance materials on several olfactory receptor cells simultaneously has verified that for each and every receptor there are odour molecules that are agonists and antagonists. This means that some materials will activate a receptor whilst others will shut it down. This opens the possibility of new approaches to malodour control.

EverCool

Our receptor-based technology is instrumental in discovering, designing and developing novel cooling agents for oral care, food and beverage applications. During our research into cooling agents, we screened 28,000 materials against receptors from which we were able to effectively reduce this number down to 350 materials that were tasted and then 25 compounds, which were then selected for in-depth application tests. Two final cooling agents stood out: EverCool 180 and EverCool 190. The products are the newest proprietary cooling ingredients to enter the market, and are a part of our successful EverCool portfolio. We are now commercialising the EverCool flavour systems in different physical forms to meet specific customer applications for cost-effective cooling performance requirements.

We will deliver consumer-relevant solutions driven by our unique innovation platform, which is backed by:

- An industry-leading R&D spend of CHF 336 million in 2010
- A rich creative talent pool: 25% of the world's best perfumers and 40% of the world's best flavourists and flavour food scientists
- Active collaboration with outside experts including our ChefsCouncil™ programme in flavours or our TecnoScent™ project, with ChemCom SA, which was established to accelerate understanding of the sense of smell
- Leveraging cross-divisional knowledge in chemistry, biotechnology, delivery systems and analytical science

Our R&D teams have a strong link with our consumer understanding teams to drive value in innovation. We are focusing on targeted areas including: TasteSolutions® to develop healthier, clean-label products; TasteEssentials® to develop – with our customers – consumer-preferred taste for food and beverage products; receptor research and new molecule creation to gain competitive advantage with our fragrance and flavour creations.

Our leading receptor research includes high throughput screening for novel natural sweetener enhancers, salt replacers and bitter maskers that help in the development of great tasting, healthier food and beverage products.

