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Human Taste Sensation can now be investigated on a molecular level with stably proliferating Human Taste Cells

SIRION Biotech provides adenovirus to transduce proliferation-promoting genes to viable human taste cells from fungiform papillae

Munich, Chemical Senses by Oxford University Press posted a publication this week regarding stably proliferating taste bud cell lines for the study of the molecular mechanism of taste sensation. Researchers from near Frankfurt and Munich identified HTC-8 cells expressing bitter taste receptor genes. Bitter tastants triggered functionally distinct signaling pathways in such HTC-8 cells. SIRION Biotech was critical in generating adenovirus that helped transducing human taste cells such that they proliferate and maintain taste cell-specific properties and authentic responsiveness to taste stimuli.

Obtaining such proliferating taste cell lines has in the past been hampered by the fact that taste cells are functionally specialized cells with limited life span and no proliferative potential, which are embedded in the context of a taste bud. This group of researchers delivers hTERT and BMI1 via adenovirus and obtains stably proliferating cell lines, which originated from individual cells and were expanded separately.

With cell lines stable for more than 25 passages the group could investigate expression of taste reception and signal transduction genes and measure endogenous responses to chemical stimuli in cell-based assays. They found that HTC-8 cells express 13 of 25 human TAS2R bitter taste receptor genes.

About SIRION Biotech www.SIRION-Biotech.com

SIRION Biotech started in Munich in 2007 with the idea of enabling novel cell models closer to reality than ever before. This required the assembly of an all-encompassing, novel viral vector platform. Both, designing de novo viral vectors and the subsequent creation of custom cell models will pave the way for superior compound development in the life sciences. SIRION's technologies have been validated in over 300 single projects with more than 100 academic and industrial partners. As a result, cell models for drug discovery and development have become highly reliable, as have the use of new viral vectors in gene therapy and vaccine studies.

Contact SIRION:
SIRION BIOTECH GmbH
Dr. Christian Thirion
Am Klopferspitz 19
D-82152 Martinsried
Tel.: +49-89-700 961 99-15
eMail: Thirion@SIRION-Biotech.com
www.SIRION-Biotech.com