

TASTE FROM MOTHER NATURE AND CULINARY ART – ANALYTICAL DECODING BY MEANS OF THE SENSOMICS APPROACH

Thomas Hofmann^{1*}

¹ Chair of Food Chemistry and Molecular Sensory Science, Technische Universität München, München, Germany

*Corresponding author - E-mail: thomas.hofmann@tum.de, Phone: +49 (89) 289 - 22201

The development of healthier food products, for example, reduced in fat, sugar, or salt, respectively, are well-known to induce non-acceptable flavor defects in the products and has, thus, created unexpected flavor challenges for the food industry. In response to the consumers' demand for healthy but tasty foods, novel ingredient discovery is essential to overcome such flavor challenges associated with the production of, in particular, sugar, salt or fat-reduced products.

Varying widely across the world, reflecting unique environmental, economic, and cultural traditions, various drying, fermentation, cooking and roasting procedures have been empirically developed during the last millenniums and, since then, the alluring flavor of the dishes prepared do attract consumers on a global scale. In particular, the food manufacturing techniques leading to the most premium tastes promise to contain essential taste compounds and/or taste modulators generated from sensory inactive precursors upon processing of the raw materials. This evolutionary refinement of food manufacturing procedures is, therefore, expected to open an interesting avenue towards the discovery of natural taste systems and taste modulating compounds, which might be applied as natural solutions to overcome flavor challenges associated with the production of, in particular, sugar, salt or fat-reduced products. The presentation will highlight analytical strategies to identify key taste compounds and taste modulators in processed food by means of a SENSOMICS approach.

Keywords: *processed food, taste compounds, taste modulators, SENSOMICS*