

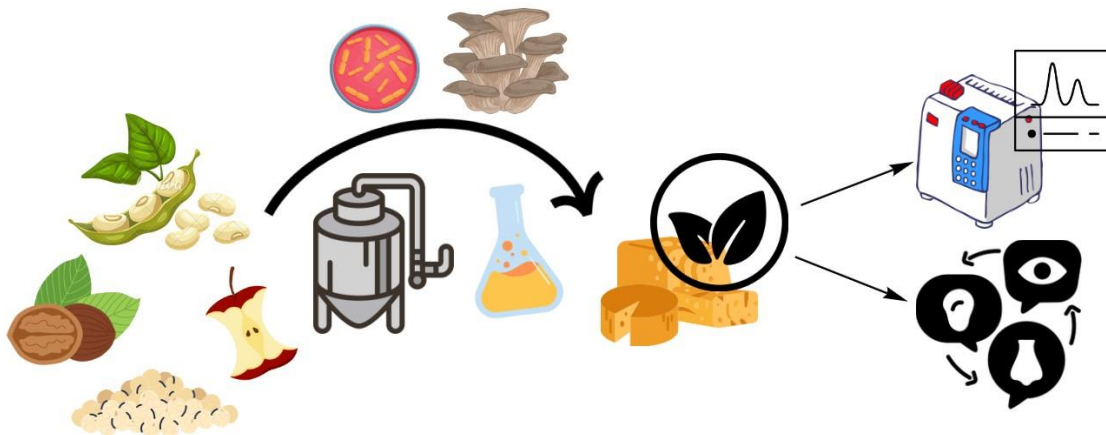


***Bachelor thesis – Project work – master thesis (english/german)***

**Production of Novel Plant-Based Cheese Products and Aroma Extraction through Fermentative Processes**

With an annual production capacity of more than 24 million tons, cheese products are very popular and versatile worldwide. Despite their high nutritional value and sensory qualities, cheese products have significant impacts on health and the environment. They have the fourth highest CO<sub>2</sub> equivalence of all foods (~8 kg CO<sub>2</sub>/kg) and contain animal sterols, which are linked to cardiovascular diseases. As a result, many consumers are seeking plant-based, health-friendly, and sustainable alternatives.

The aim of this project is to produce and isolate innovative, sustainable cheese alternatives from various industrial by-products (e.g., soy whey, brewers' spent grain, sunflower meal) through fermentation processes involving different microorganisms (e.g., higher fungi and lactic acid bacteria). The fermented substrates will be examined for their technofunctional (SDS-PAGE, water holding capacity, emulsifying ability) and food chemical properties (macro- and micronutrient profiles). The aroma profile will be analyzed through sensory evaluations and chromatographic methods (mainly GC-MS) to identify and quantify relevant aroma compounds.



**Got your interest? Contact us!**

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