

TAL 797 – Seminário

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Technological potential of SCOBY for the development of new products**Pós-graduando:** Marcela Aparecida da Silva Alexandre**Orientador:** Monique Renon Eller**Nível:** () MS (x) DS

SCOBY (Symbiotic Culture of Bacteria and Yeasts) is the starter culture traditionally used for kombucha production, a beverage obtained through the fermentation of green or black tea from *Camellia sinensis*. This culture consists of a bacterial cellulose biofilm in which acetic acid bacteria, lactic acid bacteria, and yeasts are embedded. These microorganisms are responsible for the fermentation process and the formation of the bioactive compounds characteristic of the beverage. In recent years, with the global expansion of the kombucha market, SCOBY has evolved from being solely a fermentation starter culture to becoming a by-product generated in large quantities, creating both challenges and opportunities for its valorization. Therefore, strategies for the management and utilization of this material are needed, particularly those capable of adding value and contributing to the sustainability of the production chain. The microbial diversity of SCOBY, the presence of bacterial cellulose, and its ability to confer functionality to different matrices have attracted growing scientific interest regarding its use as a raw material for the development of novel products. In this context, recent studies have demonstrated the technological potential of SCOBY and its applications across different sectors. For example, the bacterial cellulose produced by SCOBY has been employed in the development of biomaterials and active packaging, contributing to the principles of the circular economy and extending food shelf life. Furthermore, SCOBY has been used as a starter culture or ingredient in the production of various foods, including bread, jellies, ice cream, cheeses, and fermented beverages. It may also serve as a source of polyphenols and antioxidant compounds. Therefore, the valorization of SCOBY represents a strategy aligned with the principles

of the circular economy, promoting the utilization of agro-industrial by-products and expanding opportunities for innovation in the food and biomaterials industries.

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Orientador (a)

Orientado(a)