



TITLE

BIORALSTRIP - DEVELOPMENT OF ORAL STRIPS CONTAINING NANOENCAPSULATED BIOACTIVE COMPOUNDS

HIGHLIGHTS

Development of oral strips with the capacity of release nanoencapsulated bioactives

ABSTRACT

This project aims to link several key research questions as a strategy to produce and validate the function of conceptually new oral strips (OS) based on nanoparticles (NP) technology as carriers of bioactive molecules to be delivered in oral cavity thereby improving stability, pharmacokinetics (PK) and overall biopotency, greatly contributing to consumer/patient compliance and health and lifestyle enhancement. OS are orodispersible thin layers intended to deliver molecules (e.g. active pharmaceutical ingredients, dietary supplements) inside oral cavity within few seconds, not requiring water.

Moreover, taste, texture, color or even solubility profile are customizable, allowing to achieve maximum compliance by the consumer/patient. OS are, therefore, very promising tools regarding oral delivery, especially for molecules able to permeate oral epithelium (buccal and/or sublingual). This project will provide the scientific evidence to prove the viability of two models of nanoencapsulated molecules (caffeine and bioactive peptides delivered by oral strips as a more convenient system and to deliver these bioactive compounds with tailored and highest physiological activity.

Although we study two models in the framework of this project, these results may be later applied to other bioactive molecules conveniently delivered by OS. This project has favorable conditions to be performed with the potential to yield highly relevant scientific knowledge and marketable biotechnological products with great interest from the consumer/patient point of view.

KEYWORDS

Oral strips, Nanoparticles, bioactive release

PROMOTERS / PARTNERS

Escola Superior de Biotecnologia - Universidade Católica Portuguesa (coordenador); Instituto de Engenharia Biomédica (INEB)

FINANCING PROGRAM	EXECUTION DATE	GLOBAL BUDGET
PTDC/BBB-NAN/3249/2014	2016-2019	€ 129 936,00

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