

Incorporation of *Actinidia arguta* extract in mucoadhesive films – A new oral mucositis prevention/treatment approach

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Actinidia arguta is a perennial vine that mostly grows in Asian countries, being described as a traditional herbal medicine in Korea [1]. The fruit, commonly known as kiwiberry, has been associated with different therapeutic properties and pro-healthy benefits for consumers, particularly antioxidant, anti-inflammatory and anticancer effects [2-4]. These bioactive properties are due to the outstanding content in phenolic compounds, vitamins, and organic acids [4], which attracted the researcher's attention for potential application in nutraceutical and pharmaceutical industries. This is the case of oral mucositis (OM), a common side effect of cancer treatments that causes oral inflammation and pain [5]. OM can take advantage of these natural bioactive compounds to alleviate symptoms and promote healing [6, 7]. Therefore, the aim of this work is to formulate mucoadhesive films to prevent/treat OM symptoms through incorporation of *A. arguta* extract. The films were prepared by solvent casting method employing 1% of HPMC K100 LV EP solution with 2.5% glycerin, and *A. arguta* extract as solvent. Different parameters were assessed on films, namely physical features (weight: 194.8 mg; thickness: 0.37 mm; disintegration time: 15.05 min; superficial pH: 4.20; moisture content: 10.53%; swelling capacity: 55.95 %) as well as mechanical properties (resistance to extension: 10.11 N; percent elongation: 33.64%; Young's modulus: 0.0034 MPa). The *in vitro* cell assays revealed that films did not affect the viability of HSC-3 and TR146 oral cell lines. Additionally, the compounds release profile is being performed by *in vitro* and *ex vivo* permeation assays coupled to LC-MS quantification.

Acknowledgments: This work received financial support from project EXPL/BAA-GR/0663/2021 – Kiwi4Health – Exploring the Eco-Innovative Re-Use of Kiwiberry, supported by national funds by FCT/MCTES and by the projects UIDB/50006/2020 and UIDP/50006/2020 through national funds. This work was also financed by national funds from FCT - Fundação para a Ciência e a Tecnologia, I.P., in the scope of the project UIDP/04378/2020, UIDB/04378/2020 and the project LA/P/0140/2020. Filipa Teixeira is thankful for the scholarship from project EXPL/BAA-GR/0663/2021. Ana Margarida Silva is thankful for the Ph.D. grant (SFRH/BD/144994/2019) financed by POPH-QREN and subsidized by the European Science Foundation and Ministério da Ciência, Tecnologia e Ensino Superior. Francisca Rodrigues (CEECIND/01886/2020) is thankful for contract financed by FCT/MCTES—CEEC Individual Program Contract.

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