Evaluation of safety and efficacy of peptide sample from by-products of fishing activities for cosmetic products

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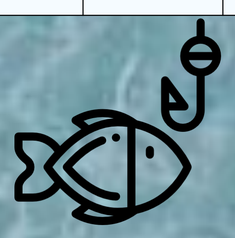
INTRODUCTION

The EcoeFISHent project (Horizon 2020,ID 101036428) represents a good example on how to reduce and recycle fish side streams and enhance environmental sustainability. The primary aim is recovery by-products of fishing activities (scales, head, and skin) for extract bioactive molecules and create innovative products in different sectors as cosmetic, nutraceutical, packaging, energy and agriculture.

Name sample	*Laboratory*	*Active Principle or Formulated*
NCO2-AQ-EFP-N <3kDa THM Material Permeate	NOFIMA	Active Principle
CHS (benchmark)	ARDES	Active principle

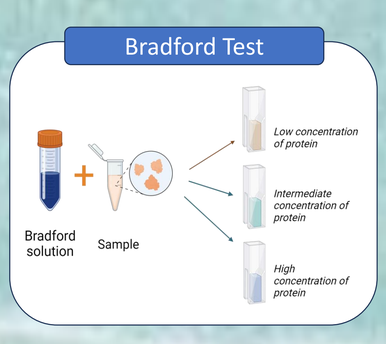


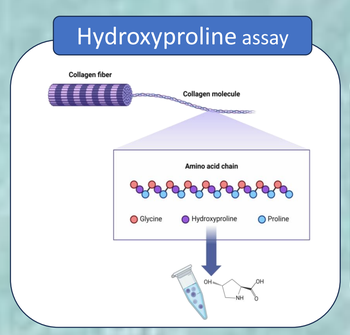
AIM

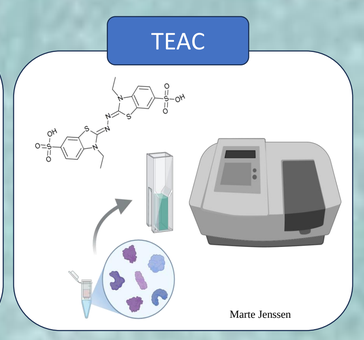
The aim of this study is to evaluate the efficacy of peptide sample (with low molecular weight) from seabass seabream biomass aimed as active principle for cosmetic product.

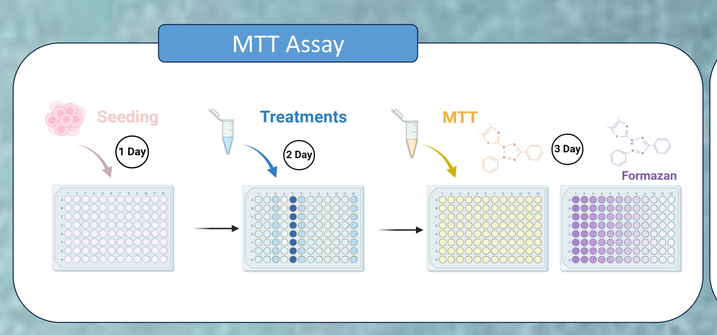
The work is organized as follow: total protein quantification trough Bradford assay, hydroxyproline quantification and TEAC assay to study the antioxidant power. Moreover, cell viability with MTT assay and wound healing power on human keratinocyte was investigated.

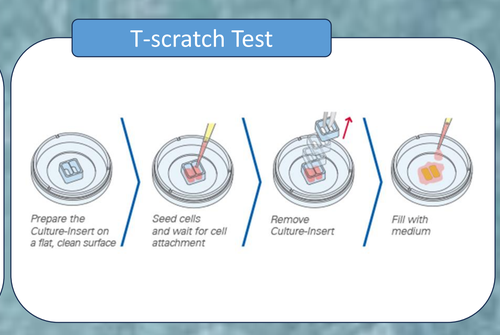
MATERIALS AND METHODS



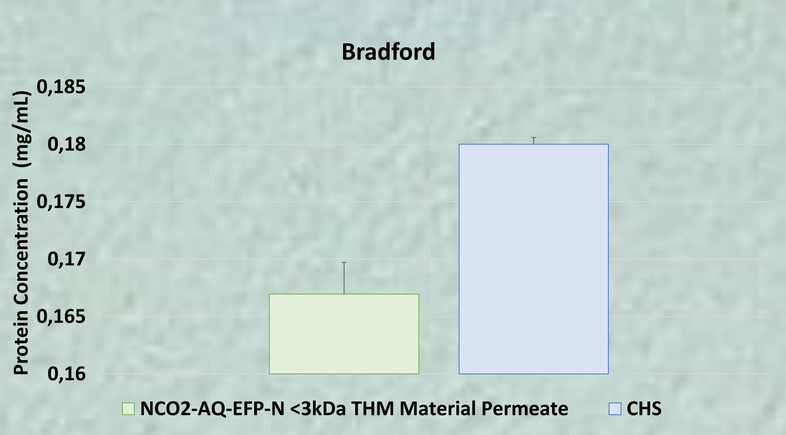


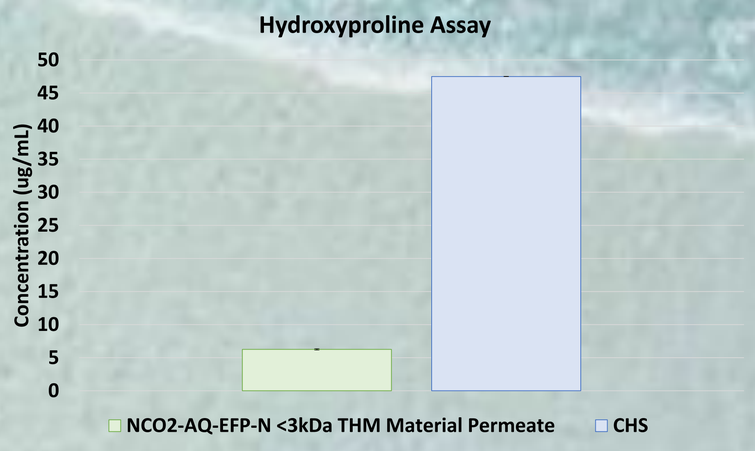


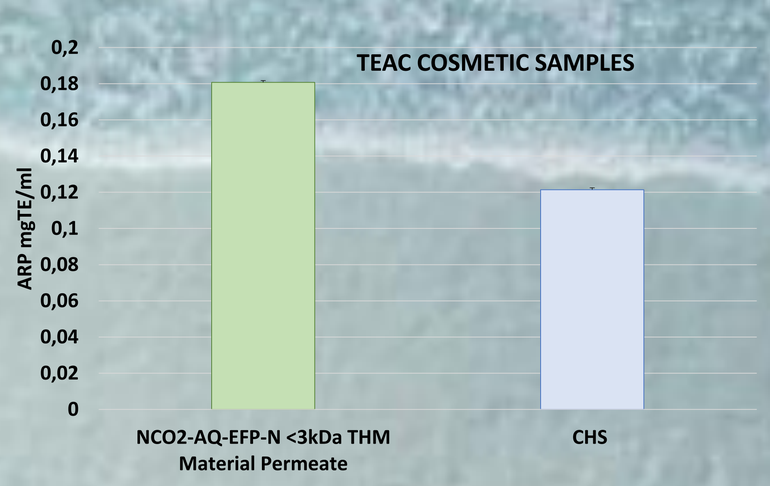


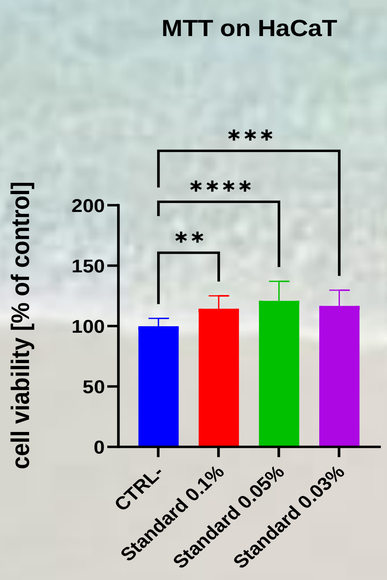


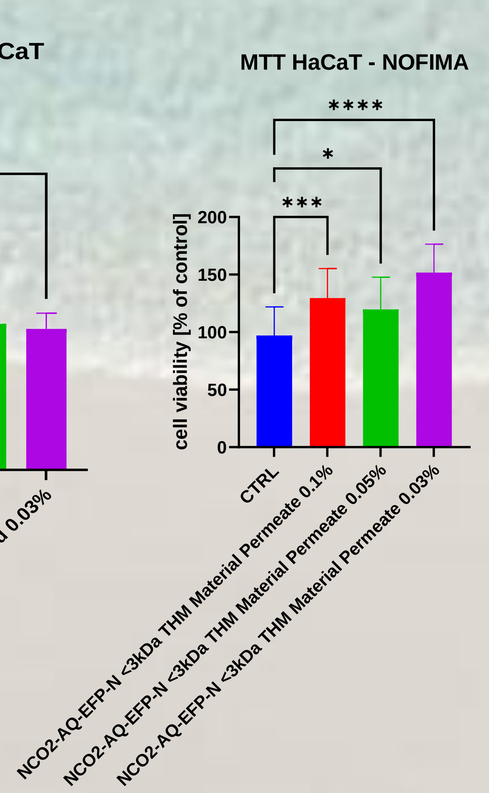
RESULTS

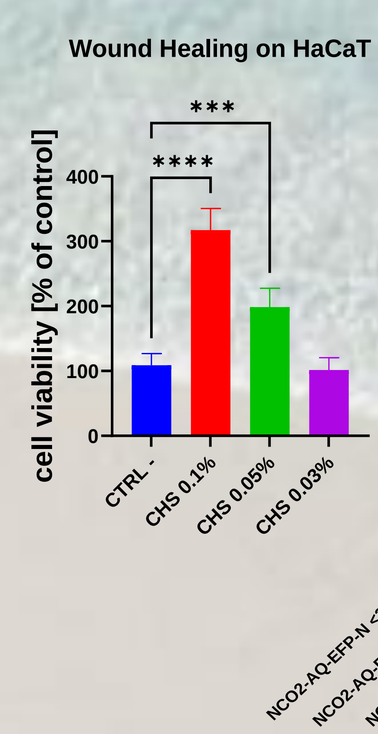


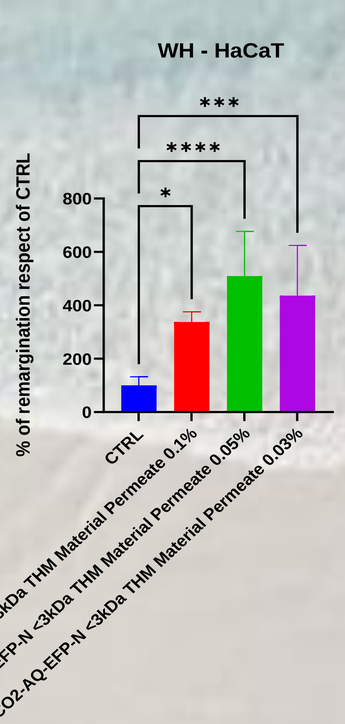


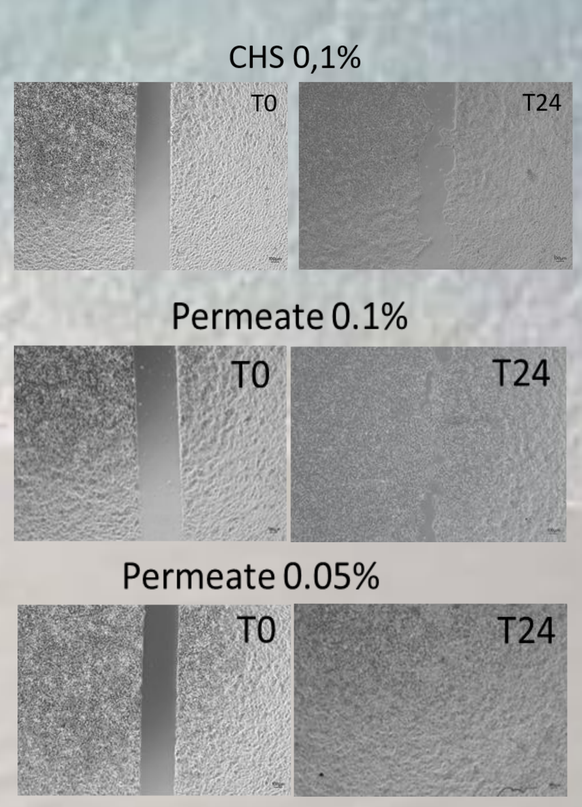












CONCLUSION

NCO2-AQ-EFP-N <3kDa THM Material Permate compared to CHS, standard collagen samples, has similar protein concentration and good ARP. For all the concentration tested positive effects were detected on cell viability and wound healing power, in particular the 0.05% concentration.