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CEPHALPOD INTERNATIONAL
ADVISORY COUNCIL **SESIMBRA**
PORTUGAL 2022

BOOK OF ABSTRACTS

April 2–8 2022

**Cephalopods in
the Anthropocene:**
Multiple challenges in
a changing ocean



P7.5

Octopus fishermen have a high rate of allergy sensitization to this species

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Abstract

Food allergy is an increasing worldwide problem. Food sensitization can occur by skin contact due to professional exposure and lead to clinical allergy, but data are sparse. In the Portuguese population diet, *Octopus* is usually fished and consumed. The major allergen (Oct v 1) in the muscle of the octopus *Octopus vulgaris* is tropomyosin, a highly conserved muscle protein with cross-reactivity between molluscs (bivalves, cephalopods, or gastropod) and also with arthropods (crustacea, insects and dust mites). The aim of this study was to investigate the prevalence of allergic sensitization to *Octopus vulgaris* on fishermen that captures it and establish its clinical relevance of it. It was applied a survey concerned to respiratory and food allergy. Skin prick tests with aeroallergens extracts and prick -to- prick skin tests with octopus were performed. The sample was 17 fishermen from a village that mainly capture of octopus, using pots and traps. Like in general population, 29% of fishermen have dust mite sensitization, but 35% of them has octopus sensitization, instead of the expected sensitization rate lower than 5%. Also, there was no significant correlation with dust mites sensitization (spearman rank order correlation $p < 0,05$). Our results show a higher prevalence rate, unrelated with dust mites sensitization, and probably due to professional exposure. This is the first study with octopus' fishermen in Portugal. Larger studies with a molecular profile should be performed in order to establish the clinical relevance of this data and the healthcare impact of it.