

## ***Exploring Meagre migration through fatty acids profile of heart phospholipids***

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The meagre (*Argyrosomus regius*) is a sciaenid fish species with high commercial value (9.04 €/Kg)<sup>1</sup> and is highly appreciated by consumers due to its versatility when cooked. As a result, it is actively targeted by both commercial and recreational fisheries in Portugal, especially in the Tagus region.

Over the past decade, the Tagus estuary and surrounding areas have accounted for 60% to 70% of the country's total meagre landings, with annual catches averaging around 132 tonnes<sup>2</sup>. In 2023, annual meagre catches reached 264 tonnes<sup>1</sup>.

Despite its economic importance, there is limited knowledge about the species' finer-scale distribution, movement patterns, population dynamics in the wild, and feeding grounds in marine areas.

As part of the MIGRACORV project (<https://migracorv.pt/>), this study aims to evaluate whether the fatty acid (FA) signatures of the heart can be used to identify potential differences between the feeding areas of adult and juvenile meagres at sea, as feeding grounds and food availability significantly impact the proximate composition of the fish. This methodology is possible because phospholipid FAs are genetically controlled and can serve as natural markers<sup>3</sup>.

Using various sample preparation methods and chromatographic techniques, we analyzed FA profiles in different phospholipid classes. The results indicate differences in the proportion of phospholipid classes between juveniles and adults, although the overall FA profiles in phospholipids remain similar.

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