

CHARACTERIZATION OF PARASITES IN FISHERY PRODUCTS: PREVALENCE AND DEVELOPMENT OF IDENTIFICATION METHOD

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Protozoan and metazoan parasites frequently infest fishes worldwide. Some of them are both fish pathogens and recognized agents of important zoonoses with high public health impact. Among them, are found Anisakid nematodes responsible for anisakidosis/anisakiosis such as *Anisakis*, *Pseudoterranova* and *Contracaecum* (*Hysterothylacium* is also included in this study) genera. Until now, in France, very few data of Anisakid distribution are available [1, 2, 3]. However, the increasing consumption of seafood in France as well as the trendy consumption of raw fish products are two main reasons to identify hazards caused by parasites for the consumers and to define efficient prevention strategies to improve the safety of fish and fishery products.

The Fish-Parasites project funded by ANR-ALIA aims at improving the safety of fishes and fish-derived products through a multidisciplinary work program. Fifteen species of fishes were selected according to a risk-ranking analysis based on French fish consumption, consumer exposure (sold fresh or frozen, consumed raw or cooked) and Anisakid level of infestation (data from literature). Fishes were either sampled during Ifremer scientific campaigns or were bought from local fish processing companies. A standardized protocol was used by all partners to collect fish biometric data, environmental data (fishing date, catching area,...) and to sample, store and identify parasites. All data were gathered in a database (PARAFISH) specifically designed for the project.

Molecular identification of parasites was based on COX2 gene direct sequencing [4] or after high-throughput sequencing (PGM Ion Torrent, Life Technologies). This second method allows to save time and costs of identification when the sample contains more than 10 nematodes. Data will be statistically analyzed according to biometric and environmental data to determine their potential structuring role on Anisakid distribution in fishes.

References:

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