

**Traceability efforts against ciguatera by developing a rapid qPCR method for special snapper species**

Schröder, U.

Max Rubner-Institut, Department of Safety and Quality of Milk and Fish Products,  
Hamburg, Germany

In Europe it is not allowed to import fish products containing microalgae toxins like ciguatoxin (Hygiene Regulation (EC) No 853/2004). Therefore, every seafood importer or entrepreneur has to implement necessary precautions in order to ensure that no toxic fish products will be placed on to the market. Nevertheless, there have been numerous ciguatera cases in recent years in Germany. The FAO counts more than 50.000 persons per year who are infected by ciguatoxins which caused by dinoflagellates, common in warm oceans and often located close to dead corals. While in earlier times only people in tropical countries became ill by ciguatera after eating infected fish, nowadays, due to the global trade of fish products also people in the northern part of the world are affected. Thus, governmental authorities and seafood importer have to find common solutions in order to minimize the risk of consumer eating such toxic fish products.

Previous investigations showed that ciguatera cases in Germany can be traced back to imported snapper filets that were mislabeled as Red snapper (*Lutjanus malabaricus*) and mostly identified as *Lutjanus bohar*. Due to the fact that in Europe no reliable and rapid method for detecting different ciguatoxins exists until yet, other possibilities for traceability activities have to pursued in guaranteeing consumer protection. In our institute we are developing a reliable and cost effective qPCR method that ensure a fast high-throughput of samples in order to detect *L. bohar* and other relevant snapper species. In that case the examination of method specificity represents a challenge in terms of the Nagoya protocol and the organization of relevant different tropical snapper species samples that requires far-reaching cooperation with different national and international institutions. First results on method development and on traceability efforts to prevent the risk of ciguatoxin poisoning in Germany will be presented.