

## The Technology

The blood hydrolysates technology obtains useful compounds from pig blood, including high proteins for animal feed and peptides for inhibiting bacterial growth.

These peptides are targeted towards the medicated animal feed industry.

In the process it's also produced high molecular weight peptides for animal feed and low molecular weight peptides that have hypertensive and antioxidant activities with potential for food supplements and nutraceutical applications.



## The Problem

*Tenacibaculum maritimum* outbreaks are particularly important causing significant losses to marine fish farmers.

Vaccination for this bacteria was not approved to European sea bass and the treatment is made with antibiotic.

The use of antibiotics may lead to development of resistant bacteria.

## Tendencies

The shift from premium carnivorous diets to those high in vegetable protein could potentially weaken the immune system due to the challenges associated with digesting vegetable proteins

Consumer awareness of the risks posed by the use of antibiotics in food systems and as such practices can contribute to the development of antimicrobial resistance.



## NEW HYDROLYSATES TO CONTROL INFECTIONS

### Benefits of technology

- Increase the economic value of a slaughter industry by-products
- Promotes fish production in marina fish farms
- Peptides reduce the fish susceptibility to pathogens and address fish bacterial infections as an alternative to antibiotics
- Supplementation of the vegetable diet with 3% blood hydrolysate promotes a similar growth of sea bass with premium diet (rich in fishmeal) and significantly decreases death from *Tenacibaculum maritimum* infection

### Data

- Production cost: 120 € ( 100 kg/day)
- Yield product: 1.4%
- Yield other 's peptides: 11.40%

### Applications

- Medicated Feed
- Feed additive

### Next steps

- Conducting product testing within real-world customer environments

### Contacts



patents.cbqf.porto@ucp.pt



+351 226 196 200

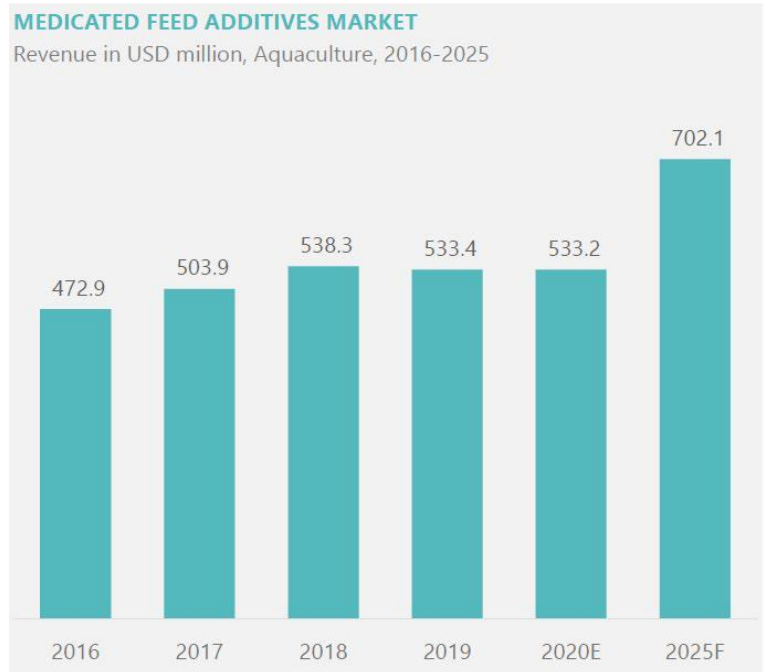


R. de Diogo Botelho 1327  
4169-005 Porto, Portugal

## Market

### Medical feed

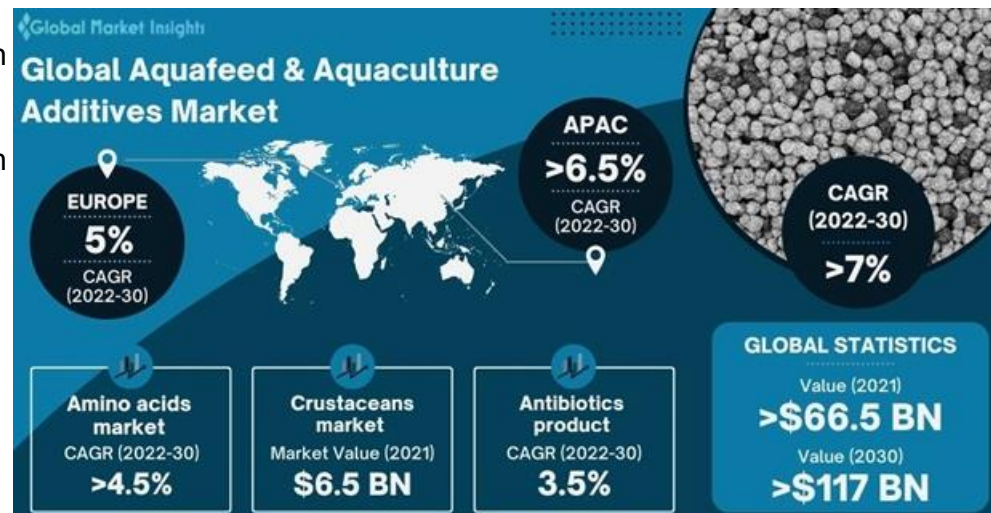
- CAGR 10% (2032)



Source: Mordor Intelligence

### Aquafeed and aquaculture additives market

- Global market size \$66.5 billion (2021)
- Global market size \$117 billion (2030)
- CAGR >7% (2022-2030)



Source: Global Market Insights

## Intellectual Property Status

Pending EP; Priority date: 17/09/20 PT116742

European application number EP21810714.2

## Contacts

- @ patents.cbqf.porto@ucp.pt
- +351 226 196 200
- R. de Diogo Botelho 1327  
4169-005 Porto, Portugal