



**Issue 25: October, 2017: This e-bulletin is aimed at personnel in fisheries and aquaculture, at fish packers, processors, distributors, retailers and finally, consumers.**

## **Seafood R&D at its best:- WEFTA 2017**

The 47<sup>th</sup> annual conference of the West European Fish Technologists Association (WEFTA) took place in the Aviva Stadium, Dublin on 9-12 October 2017. There were 223 attendees from 19 countries. This included 73 from the Irish seafood industry representing 42 companies. This major seafood R&D platform brought together experts from international centres of excellence, industry, and Irish funding providers to discuss opportunities in the area of market-ready and emerging innovative seafood technologies. Several projects will kick-off post-WEFTA including trialling super-chilling under Irish conditions and appraising further opportunities for Irish health and wellness ingredients for international markets. There were 72 oral presentations and 56 posters embracing sessions on (i) sustainable use of seafood raw materials; (ii) optimising raw material quality; (iii) optimising processing for quality and safety; (iv) processing innovation and new technologies; (v) sustainable use of by-products and underutilised raw materials; (vi) innovative technologies and market opportunities; (vii) optimising product quality; (viii) health and wellness ingredient opportunities; (ix) environmentally sustainable aquaculture technologies and (x) deeper understanding of safe and sustainable production technologies. The remainder of this short article deals with session (viii) and also with the blue economy.

### **Blue biotechnology research & the blue economy**

The keynote address discussed the wide range of opportunities that exist in the EU Horizon 2020 programme (see Marine Institute) for funding blue biotechnology research. This includes (i) ERANet Cofund (2018-2020) addressing innovative and sustainable production, harvesting and exploitation of aquatic biomass for use in food, health and other value chains; (ii) innovation actions, and research and innovation actions; and (iii) initiatives for SMEs. A presentation followed on the Irish Food Institutional Research Measure (FIRM) (Department of Agriculture, Food and the Marine) which is the primary national funding mechanism for food research in higher education institutions and other public research institutes. Converting outputs from research and innovation on growing the blue economy into opportunities for the seafood industry was the topic of the next presentation from AquaTT. This requires knowledge-management strategies for the huge amount of data

being generated by R&D and includes the EU Columbus project (<http://www.columbusproject.eu/>) with a mission to ensure measurable value creation from EU research investments contributing to sustainable blue growth.

### Healthy food ingredients from fish

Seven oral presentations were delivered on this topic: (i) developing food protein ingredients from Swedish fish filleting raw materials; (ii) characterization of seafood process waters from shrimp, herring and mussel processing; (iii) BlueShell - exploring shellfish by-products as sources of blue bioactives; (iv) turning blue to gold - health and wellness product opportunities for underutilised fish species; (v) nutrient composition including bio-accessibility of some essential and non-essential mineral elements of five green seaweeds from fish pond aquaculture; (vi) improving bio-accessibility of quality proteins from seaweed (*Palmaria palmate*) by processing; (vii) nutritional parameters and bacterial counts of seaweed (*Alaria esculenta*) processed using Japanese technology.

### Direct health related benefits of seafood bioactives

The first of three oral presentations showed that protein hydrolysate from salmon trimmings delivers potent anti-diabetic activity with potential for prevention and management of Type 2 diabetes. Presentation 2 showed that fish protein hydrolysates are an important source of antioxidant and antihypertensive peptides. However, these are present in very low concentrations but electro-membrane fractionation selectively separates and concentrates the peptides. The results could also provide an applicable and technological basis for large-scale production of bioactive peptides derived from fisheries by-products. Presentation 3 discussed the omega-3 index as a key marker for coronary heart disease mortality risk (see SeaHealth-ucd, Issue 24) and concluded it may become the key marker of the future. However, consumers and physicians need to be made aware of the index and its potential as a marker. Therefore, clinicians should run omega-3 index tests in parallel with conventional tests for blood lipids in their clinics. Oily fish must continue to be promoted as the natural source of omega-3s and is preferred to omega-3 fish oil supplements.

The WEFTA conference was organised by John Fagan and colleagues from Bord Iascaigh Mhara (BIM)

The previous 24 issues of Seahealth-ucd can be viewed at: <http://www.ucd.ie/foodandhealth/newsevents/outputs/>

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