



Fourth open SEAFOODplus Conference in Bilbao

Seafood in a changing world

Bilbao, early June... The scientists and industrial partners who are involved in SEAFOODplus met for the fourth time to present and discuss the results of their work so far. The integrated project has been running for three years now, and the first studies have been completed, providing ample material for an exciting meeting. The conference fulfilled what the event organisers had promised in the run-up: the wealth of significant findings and important discoveries that were presented in Bilbao advance our knowledge on seafood considerably. And the researchers still have one year ahead of them...

In his opening speech Professor Torger Børresen, the coordinator of SEAFOODplus, promised an exciting conference with some new and stimulating results. And he wasn't promising too much. SEAFOODplus, the biggest research project that the EU has ever sponsored in the seafood sector, is gradually drawing to a close and is now entering the home stretch, so to speak. Some projects have already been completed, others are nearing their

end. A lot of research teams are currently involved in summing up and evaluating their experiments, comparing new results with previous understanding, and preparing their findings for publication. And it is at this phase of the project that we see just how well the 20 sub-projects in the individual Pillars were chosen to complement and build up on each other. Where the results at the last open conferences bubbled up merrily from unknown depths, there is now a mighty river.

And the current is in the meantime so strong that the observer runs the risk of losing track of all its individual eddies. And so great is the quantity of new, interesting and exciting results that one has to be attentive not to overlook a particularly significant finding.

There are new findings in all of the areas addressed by the mammoth project. Not only has the project repeatedly been able to confirm the health value of fish and sea-

More than 200 participants went to northern Spain, among them numerous participants from small and middle-sized enterprises.

food, but we also now know better and more exactly than before why these foods are so valuable, and which of their components are responsible for this. This knowledge makes it possible to gear seafood products more exactly to the needs of individual consumer groups, to create tailor-made "functional foods" with a higher health value. Other studies at SEAFOODplus enable deeper insight into consumer behaviour patterns and contribute towards a better understanding of consumer reactions, enabling their better integration in product development and planning. This is an important prerequisite for fighting overweight and obesity in young people, a consumer group which often tends to show only little appetite for seafood.

Noticeably more interest from industry

At the conference venue in Bilbao it was very evident that the climate

[PROJECTS]



Alfredo Martínez: Specific seafood constituents could additionally improve the beneficial effects of a hypocaloric diet in overweight subjects.



Zusanna Pieniak: Physical properties, such as bones, smell and taste, price, availability, influence of referent people and personal factors like age, gender, and region are only a few of the factors that influence seafood consumption.



Juanjo de la Cerda: Nowadays, the main triggers for new product demands are: health, convenience and pleasure, and there are innumerable possible technologies with the capacity to answer these demands.



During recent years, the wider dissemination of food applied research results has allowed more accessible and better interchange of knowledge. This has brought a whole bunch of new possibilities to gastronomy, contributing even towards enlarging its natural space.



Javier Aran: The beginning of this century is characterized by a species diversification "fever" within the aquaculture industry. Developments over the last 10 years now make it possible to produce a large number of good-quality fish fry of many different fish species.

between the different participants - about 70 partners from 16 European states, among them both research facilities and small and

middle-sized companies - had changed noticeably. The necessary cross-border co-operation had begun rather hesitantly in

some cases a few years ago but now seems completely naturally to all concerned. One might even say it has become a real need. The

participants do not only work together; they know one another, they respect and acknowledge one another. One-time colleagues



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are now partners with everyone pursuing the same goal. In Bilbao it was at times even possible to get the feeling that this was a family gathering, although admittedly quite a big family for altogether more than 200 participants had come to the north of Spain.

One thing that Torger Børresen found particularly satisfying was the renewed rise in the number of participants from industry. Right from the start co-operation with small and middle-sized companies had played a special role in the project – co-operation that is of benefit to both sides. It gives scientists the chance to test their results in practice and to translate them more quickly into improved products. And the partners from industry gain access to the latest findings which can constitute a competitive edge and may even lead to financial profit. In contrast to earlier projects, where the utilization of the results was only possible some time after completion of the research, important results are made immediately available to the industry even whilst the programme is still ongoing. This applies in particular to new technologies which will create economic benefits for their users. The growing interest in the SEAFOODplus project could also be seen in the fact that three new Associated Members of SEAFOODplus received their certificates: INESMA, Rahbek und Young's Seafood. The interest in co-operation had in the meantime become so great, said Børresen, that new applicants had to be asked to be patient while awaiting membership.

Lectures better geared to target group

For the conference participants from industry the journey to Bilbao must have been very worthwhile this year due to the improved



Professor Torger Børresen gave special thanks to the AZTI institute that had taken on the duty of organising all the details locally in Bilbao and selected the best facilities for this event.

quality and better comprehensibility of the lectures compared to a year ago in Tromsø. At past events the lectures tended to be heavy with scientific information, and the language in which they were held paid little heed to the fact that the audience contained numerous non-scientists who would sometimes be unfamiliar with the vocabulary and style of the talks. This had changed noticeably in Bilbao this year. Nearly all of the talks were more easily understandable, clearer, and thus more beneficial to the listeners. Some of the speakers had even taken part in a special training course in Copenhagen in preparation for the conference with the aim of improving their rhetoric skills and pinpointing their results more clearly. And the effort was well worth it, as Bilbao showed. As in the previous year, the conference organisers had again invited outside specialists who are not partners of the SEAFOODplus project but who had an enriching influence on the event programme.

And the decision in favour of Spain as the venue for the conference was a favourable one, too. Spain is one of Europe's biggest seafood nations, not only with regard to fisheries, aquaculture and fish research but also as regards food preparation or, to be more precise, "culinary creativity". At the very latest when star cook Ferrán Adrià caused an international sensation with his molecular cuisine even doubters will have realised that the focus of gastronomic innovation in Europe had shifted closer to Spain. In this respect, the talk given by the two-star Spanish chef Andoni Luis Aduriz from Restaurante Mugaritz was undoubtedly one of the highlights in Bilbao.

Differences in European seafood consumption

The conference programme was divided into five sessions, each focusing on a different topic block. The first session was concerned

with Nutrition, gastronomy and consumer research in seafood. Monique Raats (University of Surrey, UK) revealed in her talk that there are great cultural differences in Europe with regard to when and from which age seafood should first be given to small children. This is possibly one of the reasons behind the sometimes extreme differences in per capita consumption of seafood in individual countries. And it is a critical issue, too, for particularly seafood, when offered as part of a hypocaloric diet can contribute considerably to fighting overweight and obesity among young people. Alfredo Martinez (University of Navarra, Spain) drew attention to this fact in his talk.

The second session was devoted to New seafood supply from aquaculture and the need for traceability. Javier Arán from the Spanish seafood company Isidro de la Cal presented new species which could give considerable impetus to the development of European

aquaculture. In order to prevent misunderstandings and product fakes a lot of species can today be identified using genetic methods on the basis of DNA. Miguel Angel Pardo (AZTI, Spain) presented these modern methods in his talk. Three other talks within this topic block showed how important traceability is today in industry and the grocery sector. This leads to huge logistic requirements, particularly as more and more binding international standards crystallise for data capture, documentation, storage and transfer.

Effective assays for pathogenic germs

Session 3 was concerned with Seafood safety and controlling microbial risks. Steven Otwell (University of Florida, USA) emphasised the fact that (in spite of occasional doubts) seafood and aquaculture products remain a recommended healthful choice due to low saturated fats, certain omega-3 fatty acids, and a recognized source of selenium and vitamin B12. This is, of course, only true if the seafood products are free from harmful substances and microbiological contaminations. With pulsed light, a novel decontamination technology was available which now offered the industry compelling possibilities. Amaia Lasagabaster (AZTI-Tecnalia, Spain) underlined this fact, describing that she had achieved some very important inactivation levels of spoilage and pathogenic microorganisms with this quick and effective non-thermal decontamination technology.

A new standardised real-time RT-PCR assay for Norovirus and Hepatitis A virus detection was presented by Albert Bosch (University of Barcelona, Spain).

The talk given by Luciana Croci (Istituto Superiore de Sanità, Roma, Italy) dealt with a new assay for reliable identification of *Vibrio* bacteria which are among important human pathogens.

Sustainable and ethical aquaculture production was the central theme of the fourth session. Ole Torrissen (Institute of Marine Research, Norway) pointed out that nearly all species that are currently produced in aquaculture are wild fishes that are kept in captivity. He sees close relationships between animal welfare and aquaculture productivity. Stress and pain influence survival, growth and product quality. It was surprising, he said, that the aquaculture industry had put so little resources into exploiting this potential.

New results from experiments carried out on ghrelin, a hormone that was only discovered in 1999 and which regulates growth and fattiness in salmon, were presented by Elisabeth Jönsson Bergman (Göteborg University, Sweden). The information supplied by Rian Schelvis (IMARES, NL) also met with great interest. She presented the results of a consumer survey involving possible quality differences between stressed and non-stressed cod. Whilst Icelandic fish specialists noted clear differences, these went unnoticed by consumers. Independent of this, however, consumers welcomed information, for example on the product packaging, on how the fish had been farmed and favoured a stress-free environment. Ethical questions of fish production are currently gaining more and more significance for consumers. Pirjo Honkanen (Fiskeriforskning, Norway) confirmed this in her talk.

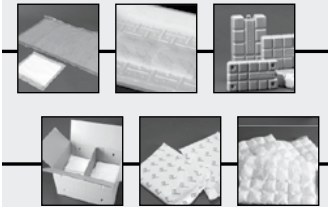
Final open conference will take place in Copenhagen

Session 5, Initiatives for industry integration in research and innovation, was largely dominated by Spain. After Josefina Lindblom from the European Commission (DG Research, Unit Research and SME's) presented opportunities for SMEs within the seafood sector in FP7, Begoña Pérez-Villarreal (AZTI-Tecnalia, Spain) and Javier Cañada (Angulas Aguinaga, Spain) illuminated the complex topic from the viewpoint of research and industry. The fact that involvement in research can also be worthwhile for small and middle-sized companies is illustrated by the company Angulas Aguinaga which was awarded the Prix d'Elite for one of its innovative products at ESE 2007.

The fourth open SEAFOODplus Conference is now history and the SEAFOODplus project is drawing to a close, too. Torger Børresen expressed an invitation to this year's participants and all interested guests to attend the final conference which is to be held in Copenhagen 9-11 June next year. Copenhagen was the first venue for the sequence of regular meetings and so it is Copenhagen where the project is to end. By then all the practical work will have been completed. Participants in Bilbao were already given an idea of what visitors can expect next year in Copenhagen: a richly filled programme, exciting talks with important results, and lively discussion. Perhaps some of the participants will experience a feeling of wistfulness when the project finally ends after nearly five years. Eurofish will keep the memory of Bilbao alive for some time, however, by reporting on some of the most exciting results in coming issues. ■

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