

Holmenkollen Park Hotel, Oslo 20 - 21 September 2010















# **Dear conference delegate**

The First International Marine Ingredient Conference takes place in Oslo in September 2010. The ambition is to establish this event as "THE" most important and innovative meeting place for the international marine industry and other interested players.

We proudly present a very interesting programme which addresses challenges and introduces perspectives for the international marine ingredient industry. Many industry experts and researchers from all over the world will present marine innovations and developments of bioactive and nutritional marine ingredients for use in foods, functional foods, food and feed supplements, biotechnology, pharmaceuticals and other applications. International market trends and business opportunities for marine ingredients will be focused, and also challenges within documentation, regulatory issues, health, sustainability, food safety, food security and environmental issues.

Obviously, such an international conference includes more than the formal program. A "get together" reception will be held at the conference hotel Holmenkollen Park Hotell RICA in the old part of the hotel built in the Norwegian "dragon-style", and the conference dinner will take place at the hotel. There will be plenty of time for face-to-face contact with interesting and possible new collaborating partners during the conference. And for those of you who like to add practical industry input to your conference attendance, we invite you – after the conference, to visit Omegaland, (a cluster of marine ingredients enterprises). Hop on a plane from Oslo and go to beautiful Ålesund on the West coast of Norway. A nice conference bonus!

Welcome to a unique and unforgettable conference in Oslo!

## Sigrun Bekkevold

Leader of the programme committee

#### **Jostein Refsnes**

Programme committee and organiser

#### **Trude Olafsen**

Coordinator of the conference

# Programme committee and organisers



Sigrun Bekkevold General Manager RUBIN



Jostein Refsnes Chairman MARING Forum



Gunnar Berge Director Business Development Pronova BioPharma



**Kjartan Sandnes** R & D Manager Marine Bioproducts



Marit Aursand Research Director SINTEF Fisheries and Aquaculture



**Jarle Wang-Andersen** Manager Bio-Lab Nofima Ingredients



**Trude Olafsen** Senior Adviser SINTEF Fisheries and Aquaculture

### **RUBIN**

RUBIN is a foundation established in Norway in 1992, and works for increased and more profitable utilization of byproducts and rest raw materials from the fisheries and fish farming in Norway.

### **MARING Forum**

MARING Forum is a group within the Norwegian Seafood Federation organizing companies in the increasing biomarine industry in Norway.

# Reception at the Holmenkollen Park Hotel RICA

The reception will be held at the conference hotel Holmenkollen Park Hotell RICA in the old part of the hotel. Dating back to 1894, this old part is built in the Norwegian "dragonstyle" - a worthy architectural sight.



# **Sponsors**



www.seagarden.no

#### **Main sponsor:**

Seagarden is a leading supplier of high quality marine ingredients to customers worldwide. Seagarden's competitive advantages reside in its wide range of powders and extracts as regards both marine savoury ingredients and marine bioactives, its high quality standards and competitive prices.

Seagarden has several production plants along the Norwegian coastline that allow the company to secure full control of the manufacturing process and its high quality, and can rely on an extensive international sales and distribution network.

CALANUS

www.calanus.no

Calanus AS is a biomarine company which develops unique health- and nutrition products based on the marine copepod Calanus finmarchicus, the largest renewable and harvestable resource in the North Atlantic Ocean. As the first mover in this field, the company has had to engage itself in developing the entire value chain, including harvesting, processing and product formulations.



www.nutrimar.no



www.pronova.com



www.nofima.no



www.sintef.no



www.nordlaks.no



www.gea-westfalia.no



www.akerbiomarine.com

Nutrimar is a producer of oil and other products based on rest raw material from salmon and other marine sources.

Pronova is a global leader in the research, development and manufacture of marine-originated omega-3 derived pharmaceutical products.

Nofima is a business oriented research group working in research and development for the aquaculture, fisheries and food industry in Norway.

As a well known independent and industrial research institute, SINTEF Fisheries and Aquaculture has knowledge and broad competence in the field of utilization of renewable marine

Now Nordlaks is processing salmon and trout oil and protein from super fresh raw material from own slaughter house and VAPfactory next door.

GEA Westfalia Separator is one of the world leading companies in separation techniques to food industry, industrial, environmental-, marine- and offshore processes.

Aker BioMarine is a vertically integrated company that manufactures bio-tech products based on Antarctic krill. Aker Bio-Marine`s, human product, Superba® Krill Oil is high on omega-3 phospholipids and antioxidant astaxanthin. Qrill® is Aker BioMarine's brand name for the aquaculture and pet food market.



www.marinebio.no



www.novozymes.com



www.firmenich.com



www.fmctechnologies.com



www.epax.com

# **Programme**

# **Sunday 19th September**

18:00 - 20:00 Welcome Reception at the Ski Museum in Holmenkollen

# **Monday 20th September**

08:30	Registration and Presenters Preparation Desk opens
10:00 - 10:05	Sigrun Bekkevold, RUBIN, Leader of the programme committee: Opening and
	welcome.
10:05 - 10:25	Fride Solbakken, Political adviser at the
	Ministry of Fisheries and Coastal Affairs,
	Political goals and challenges.

# **Session 1**

# **Setting the Marine Ingredient** Scene

Chair: Jostein Refsnes

10:25 – 11:55	Albert Tacon, University of Las Palmas, Spain. Food from our oceans: raw material availability and opportunities for marine feed ingredients – a global overview.
10:55 – 11:15	Robert Wahren, Core Competence, Sweden. Industrial status for marine ingredients – market trends and success factors.
11:15– 11:35	Gunn Harriet Knutsen, FHL Maring, Norway. Regulatory framework for food and feed – Consequences for biomarine ingredients industry.
11:35 – 12:00	Coffee break and poster session

# **Parallel session 2A**

# Proteins and peptides; the new megatrend

17:00 - 17:15

17:15

19:30

Chair: Karl Almås	
12:00 - 12:30	Hordur Kristinsson, Matis, Iceland.  Marine hydrolysates – products and
12:30 – 12:50	potentials. <i>Bjørn Skjævestad, Altavida, Norway.</i> Market trends in marine nutrition- and health products in the US.
12:50 – 14:00	Lunch
Industr	v
14:00 - 14:20	Rolf Berge, Marine Bioproducts,
	<i>Norway.</i> Tailor-making and documenting marine bioactive peptides.
14:20 – 14:40	Bernt Walther, Aqua Bio Technology/
	<i>University of Bergen, Norway.</i> Three billion years of Life without Health Care:
	Commercial and Medical uses of Marine
	Proteins.
14:40 - 15:00	Michael Doolan, Complete Filtration
	<b>Resources, US.</b> Recovery of added value protein fractions.
15:00 – 15.30	Coffee break and poster session
R&D	
15:30 – 15:50	André Marette, Laval University
10.00	Quebeq, Canada. The effect of fish proteins and peptides on type 2 diabetes and related metabolic disorders.
15:50 – 16:10	Bjørn Liaset, National Institute of
	Nutrition and Seafood Research, Norway.
	Modulation of bile acid metabolism in
	the prevention of obesity related diseases
16.10 16.20	- a novel mechanism for dietary FPH.
16:10 – 16:30	Edel Elvevoll, University of Tromsø.
	<i>Norway.</i> Marine Bioactive Peptides from digestion and their relation to car-
	diovascular markers.
16:30 – 16:45	Ingrid Undeland. Chalmers University of
2.0.20	Technology, Sweden. Production of
	protein isolates from underutilized marine
	raw materials using pH-shift processing.
16:45 – 17:00	Harald Breivik, Neperdo Biomarine,
	Norway. International standard for
	protein hydrolysates.

Questions and discussion

Closing remarks day 1

Conference dinner

# **Parallel session 2B**

# Omega-3, marine lipids - latest developments and trends.

Chair: Gunnar Berge

12:00 - 12:30	Michael Crawford, London Metropolitan
	University, United Kingdom. The
	sustainability of human intelligence
	depends on the sustainability of Marine
	Ingredients.

12:30 – 12:50 Adam Ismail, Global Organization for EPA and DHA omega-3 (GOED), USA.
An overview of EPA/DHA omega-3 markets and innovation.

12:50 - 14:00 Lunch

14:00 – 14:20 *Odd Ivar Lekang, Norwegian University of Life Sciences, Norway.* Alternative sources for omega-3 oils, potentials and limitations.

# **Industry**

14:20 - 14:40	Nils Hoem, Aker Biomarine, Norway.
	Phospholipids from Antarctic Krill -
	their production, structural chemistry
	and areas of use

14.40 – 15:00 Ragnar Hovland, Pronova Biopharma, Norway. Marine ingredients in pharmaceutical products- barriers and opportunities.

15:00 – 15.30 Coffee break and poster session

## R&D

NOD	
15.30 - 15.50	Ivar Storrø, SINTEF Fisheries and
	Aquaculture, Norway. Pro-oxidants and
	anti-oxidants in oxidation of marine
	phospholipids.
16.50 - 16.10	Xuebing Xu, University of Aarhus,
	Denmark. Process development for
	enzymatic upgrading of Omega-3 oils.
16:10 – 16.30	Charlotte Jacobsen, Technical University
	of Denmark. Oxidation stability in foods
	enriched with omega-3 fatty acids.
16.30 - 16:50	Bente Ruyter, Nofima, Norway. Low
	oxidised oils and potential health

16:50 – 17:20	Questions and discussion
17:20	Closing remarks day 1
19:30	Conference dinner

advantages.

# **Tuesday 21th September**

## **Session 3**

# Runner ups in the marine ingredient family

Chair: Marit Aursand

09:00 - 09:30	Dimitri Sclabos, Tharos Ltd , Chile.
	South American (Antarctic) Marine
	Ingredients. Processing, Supply and
	Demand Outlook.

09:30 – 09:50 *Kurt Draget, NOBIPOL NTNU, Norway.* Physical properties of gelatines from marine cold water fish species as function of extraction conditions.

09:50 – 10:10 *Morten Sørlie, Norwegian University of Life Sciences/ Kjell Vårum, NOBIPOL, NTNU, Norway.* The many faces and applications of chitosan.

10:10 – 10:25 Coffee break

10:25 – 10:45 *Otto Pulz, IGV Institut für Getreidever-arbeitung GmbH, Deutchland.* Industrial scale production of microalgae biomass for valuable substances.

10:45 – 11:05 *Nils Henrik Norsker, University of Wageningen, Netherlands.* Microalgae as ingredients in food and nutraceuticals.

11:25 – 11:45 Elisabeth Holen, National Institute of Nutrition and Seafood Research. Norway. Nucleotides from cod roe, effects on humane immune cells.

11:45 – 12:00 Questions and discussion

12:00 - 13:00 Lunch

# Session 4

# Marine Ingredient Industry – case studies

Chair: Kjartan Sandnes

13:00 - 15:00 • Seagarden

• Calanus

• SINTEF Fisheries and Aquaculture

NOFIMA

• *Nutrimarine Life Science, Einar Lied,* Marine peptides in functional and therapeutic nutrition

• Björn Strandwitz, Biopolymer Products of Sweden AB, A unique multipurpose glue from the common blue mussel for medical and technical applications

• Others TBC

15:00 – 15:20 Questions and discussion

15:20 – 15.30 "Best poster" 15:30 – 15:45 Closing address

# Reputable industry experts and researchers from all



**Sigrun Bekkevold** General Manager RUBIN, Norway



Kurt Ingar Draget Prof II / Res. Scientist Norwegian Biopolymer Laboratory, NTNU, Norway



**Bjørn Skjævestad** CEO Altavida AS, Norway



**André Marette** Professor of Medicine at Laval University, Canada



Fride Solbakken Political adviser at the Ministry of Fisheries and Coastal Affairs, Norway



**Bernt T. Walther** Professor at Department of Molecular Biology, University of Bergen, Norway



**Bente Ruyter** Senior Scientist Nofima Marin, Norway



Michael Crawford
Dir. of The Institute of Brain
Chemistry and Human Nutrition,
London Metropolitan University



**Bjørn Liaset** Scientist at NIFES, Norway



Charlotte Jacobsen
Head of Section for Aquatic
Lipids and Oxidation at the
DTU, Denmark



**Dimitri Sclabos Katevas** General Manager Tharos' Ltd., Chile



**Edel Elvevoll**Professor at the University of Tromsø, Norway



Hordur Kristinsson Director of Biotechnology and Biomolecules Division at Matis, Iceland



Ivar Storrø Senior researcher at SINTEF Fisheries and Aquaculture, Norway



**Kjell Vårum** Professor at Department of Biotechnology, NTNU, Norway



Niels-Henrik Norsker Researcher at Wageningen Universitet, Holland



Nils Hoem Vice President Pharma Aker BioMarine ASA, Norway



Odd Ivar Lekang Associate Professor at IMT, Norwegian University of Life Sciences, Norway



Otto Pulz Head of the biotechnology department IGV GmbH, Germany



**Robert Wahren** CEO Core Competence AB, Sweden



Rolf Kristian Berge Professor Department of Clinical Biochemistry, University of Bergen, Norway



**Albert Tacon** Visiting Professor Aquaculture Reserch Group University of Las Palmas, Spain



**Xuebing Xu**Professor in Agro-Biotechnology Science, Aarhus
University, Denmark



**Gunn Harriet Knutsen** FHL Maring, Norway



**Harald Breivik** CEO in Neperdo Biomarine, Norway

# over the world...



Morten Sørlie Professor at IKBM Norwegian University of Life Sciences, Norway



Ingrid Undeland Associate professor Chalmers University of Technology, Sweden



Elisabeth Holen Scientist at Aquaculture Nutrition, NIFES, Norway



Ragnar Hovland Director Discovery Research at Pronova BioPharma,



Michael Doolan Divisional Director Europe Complete Filtration Resources, USA

# **Adam Ismail** *Executive Director of the GOED, United Kingdom*

### **Einar Lied**

Owner and Man Dir of Nutrimarine Life Science AS and Professor at University of Bergen-Institute of Medicine, Norway

### Björn Strandwitz

CIO of Biopolymer Products of Sweden AB



# Study tour to Omegaland in the Alesund area

There will be arranged a one day study tour after the conference to Ålesund - a city in the Western part of Norway. Omegland - a network organising the marine ingredient industry in the area - are the formal organiser of the study tour. We can promise interesting industry visits to Firmenich Bjørge Biomarin and EPAX and you will learn more about the network Omegaland. Nice sight-seeing in a spectacular part of Norway and good food are included!

### Programme:

- Opening session, by Robert Wolff, Project Manager of Omegaland
- Visiting Firmenich Bjørge Biomarin
- Lunch
- Visiting EPAX
- Gathering dinner

#### Date

22. - 23. of September following the main conference.

#### How to reach Alesund

The easiest way to reach Ålesund is to travel by air. Both SAS and Norwegian operates from Gardermoen to Vigra, Ålesund. Delegates have to book and pay for their own flight. We recommend you to travel from Oslo at evening the 21. If you want a memorable voyage, you can travel from Ålesund by the coastal express Hurtigruten either southward to Bergen (00:45 am) or northward to Trondheim (15:00 pm), and then by airplane or train back to Oslo. This is not organised by Omegaland.

#### Hotel

We will stay at Raddisson Blu Hotel. Special offer for delegates are NOK 1120,- for single room and NOK 1320,- for double room. Delegates have to pay for their own accommodation. Reservation will be done once you have registered.

#### **Price**

Total cost for study tour is NOK 1500,-. This includes lunch, study tour and gathering dinner. If you only will attend dinner, the cost is NOK 350,-.

For more information and registration: www.omegaland.no or link from www.marineingredients2010.net. and/or contact Project Manager at Omegaland, Robert Wolff Robert.wolff@omegaland.no>, +47 994 49 579.

Terms of registrations

All registrations are to be made online. At time of registration it is mandatory to pay the whole conference fee. The secure online payment system accepts all major credit cards: Master, VISA, AMEX and Diners. Hotel booking for Holmenkollen Park Hotel Rica must be made through the conference registration form.

Deadline for registration is 20 August 2010.

#### **Conference fees**

The conference registration fee includes all meeting material, including a folder of abstracts.

Early registration will give you a considerable discount: Registration before 15 June 2010: NOK 3 300 (approx euro 400) Registration between June 15 - August 20: NOK 4 300 (approx euro

## Accomodation, meals and social events

(in addition to the conference fee)

A limited number of rooms have been reserved for MIC 2010 at Holmenkollen Park Hotel RICA- to a reduced price.

Reception 19 September (a light meal and drinks included): NOK 450 Full board\* Single room 20.-21.September NOK 2 830 Full board Double room 20.-21.September NOK 4 930

\*Full board includes room with breakfast, lunches 20-21 Sept and conference dinner 20 Sept

Single room 19.-21. September (full board 20-21 + room with breakfast 19-20) NOK 4 025

Double room 19.-21. September (full board for two persons 20-21 + room with breakfast 19-20) NOK 6 226

Single room 20.-22. September (full board 20-21 + room with breakfast 21-22) NOK 4 025

Double room 20.-22. September (full board for two persons 20-21 + room with breakfast 21-22) NOK 6 226

Single room 19.-22.September (full board 20-21 + room with breakfast 19-20 and 21-22) NOK 5 220

Double room 19.-22. September (full board for two persons 20-21 + room with breakfast 19-20 and 21-22) NOK 7 522

Hotel expenses (lunches and coffee breaks) without overnight lodging for the whole conference and without conference dinner - day 1 and 2: NOK 1.230

Conference dinner, drinks included (for those with no accommodation at the hotel): NOK 650

NB! Hotel expenses (full board) are paid directly to the hotel when checking out. Meals and social events for non residents are paid online at registration.

Cancellation policy

MIC 2010 holds one uniform cancellation policy for the registration fee, hotel bookings and optional program items all alike. Cancellations must be made directly by e-mail to mic2010@videre.ntnu.no.

The cancellation fee will be NOK 500 administration charge for cancellation received within 20 August. For cancellation after 20 August, the fees must be paid in full.

#### Contact

All registrations, changes, cancellations and payment are handled by mic2010@videre.ntnu.no.

#### **Organizing Secretariat**

For general inquiry:

email: rubin@rubin.no or jon.aulie@fhl.no

Contacts:

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The RUBIN Foundation

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www.marineingredients2010.net











