SATURDAY, August 25

WAS MEMBERS MEETING
Saturday, August 25  16:00 - 17:00  Sully 1

OPENING CEREMONY & WELCOME DRINK
Saturday, August 25  18:00 - 19:00  Berlioz Auditorium
Chair: Patrick Sorgeloos
PLENARY
Sunday, August 26 09:00 - 10:45 Berlioz Auditorium
Chair: Michael New

09:00   EAS and WAS Awards

09:15   Árni M. Mathiesen
FAO UPDATE ON THE STATUS OF WORLD AQUACULTURE

09:30   Robins McIntosh
CHAROEN POKPHAND FOODS – CHANGING THE FACE OF ASIAN AQUACULTURE

10:00   Øyvind Oaland
TECHNOLOGICAL INNOVATION IN SALMON FARMING

10:30   STUDENT SPOTLIGHT AWARD
Inácio Mateus Assane
COMBINATION OF ANTIMICROBIALS AS AN APPROACH TO REDUCE THEIR USE IN AQUACULTURE: EXAMPLE OF USING THIAMPHENICOL WITH FLORFENICOL AGAINST *Aeromonas hydrophila*

*Samuel M. Pountney*, Ingrid Lein, Herve Migaud, Andrew Davie
TEMPERATURE EFFECTS ON CAPTIVE LUMPFISH *Cyclopterus lumpus*
BROODSTOCK SPAWNING SEASON AND GAMETE QUALITY

*Wouter Visch*, Per Bergström, Göran Nylund, Henrik Pavia, Mats Lindegarth
SPATIAL GROWTH PATTERNS AND NUTRIENT MITIGATION CAPACITY OF THE BLUE MUSSEL *Mytilus edulis* AND KELP *Saccharina latissima* ON THE SWEDISH WEST COAST

10:45   BREAK
IMMUNOLOGY AND PATHOLOGY
Sunday, August 26  11:20 - 12:40  Rondelet
Chair: Nerea Roher

11:20  Elisabeth Ytteborg, Gerrit Timmerhaus, Vibeke Høst, Celeste Jacq
SWIMMING CHALLENGE WITH WILD, FARmed AND HYBRID ATLANTIC SALMON *Salmo salar* REVEAL REMARKABLE PHYSIOLOGICAL DIFFERENCES

11:40  Folalu Adekunle Awe, Adeolu Akinyemi
IDENTIFICATION OF BACTERIA ISOLATED FROM CATFISH *Clarias gariepinus* FROM SELECTED FISH FARMS IN ODOGBOLU LOCAL GOVERNMENT, OGUN STATE, NIGERIA

12:00  Bibha Kumari, Shahla Yasmin
INVESTIGATION OF HISTOPATHOLOGICAL CHANGES IN *Heteropnestis fossilis* CAUSED BY ARSENIC

12:20  Angela Lusiastuti, Djoko Wiryono, Ratna Kurniasih
THE BLOOD DISORDER IN *Osphronemus guramy*: IS IT POSSIBLY CAUSED BY MEGALOCYTIVIRUS INFECTION?

STUDENT WORKSHOP
Sunday, August 26  11:20 - 12:40  Einstein Auditorium
Chairs: Nuno Leite, Nicole Rhody

11:20  Nuno Leite, Katherin Steinberg
WELCOME

11:30  Jean Michel Mortillaro
THE ROLE OF CIRAD - LA RECHERCHE AGRONOMIQUE POUR LE DÉVELOPPEMENT (AGRICULTURE RESEARCH FOR DEVELOPMENT) IN RESEARCH AND PARTNERSHIP IN TROPICAL AQUACULTURE AND THE OPPORTUNITIES FOR STUDENTS

11:45  Nicole Rhody
TIPS ON HOW TO PREPARE FOR YOUR NEXT JOB INTERVIEW

12:00  Tomé Silva, SPAROS
BRINGING MODELING TOOLS FROM RESEARCH TO PRACTICAL APPLICATIONS

12:25  OPEN PANEL DISCUSSION WITH:
Kathrin Steinberg, EAS Board Student Representative
Jorge Dias, SPAROS, Industry
Nicole Rhody, WAS Student Activities Committee, Mote Marine Laboratory, Non-Profit Research Institution
Patricia M.C. Moraes-Valenti, WAS Board, University of Santo Amaro
MICROBIAL COMMUNITY MANAGEMENT  
Sunday, August 26  11:20 - 12:40  Sully 2  
Chair: Olav Vadstein

11:20  **Stine Wiborg Dahle**, Roman Netzer, Trond Størseth, Deni Ribicic, Deni Košeto, Gunhild Hageskal, Anna Lewin, Kari K.J. Attramadal

**SYSTEMATIC MICROBIOTA PROFILING AND DEVELOPMENT OF DECISION SUPPORT TOOLS FOR NEXT GENERATION AQUACULTURE MANAGEMENT**

11:40  **Priscila Gonçalves**, Elizabeth Copeland, Amanda Ricketts, Simon Rechner, Rocky de Nys, Arnold Mangott, Torsten Thomas

**MAPPING MICROBIAL COMMUNITY SHIFTS DURING BIOREMEDIATION OF SHRIMP FARMING WATER**

12:00  **David Straus**, Thomas Meinelt, Dibo Liu, Lars-Flemming Pedersen, Manuel Gesto, John Davidson, Chris Good

**PERACETIC ACID – A GREENER SOLUTION FOR DISINFECTING AQUACULTURE SYSTEMS**

12:20  **Van Bao Duy Le**, Ngoc Phuoc Nguyen, Kristof Dierckens, Viet Dung Nguyen, Nico Boon, Tim Lacoere, Frederiek-Maarten Kerckhof, Jo De Vrieze, Olaf Vadstein, Peter Bossier

**GUT MICROBIOTA OF MIGRATING WILD RABBIT FISH *Siganus guttatus* LARVAE HAVE LOW SPATIAL AND TEMPORAL VARIABILITY**

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NON-FOOD AQUACULTURE  
Sunday, August 26  11:20 - 12:40  Sully 1  
Chair: Hugues de Verdal

11:20  **Martha Patricia Hernández-Vergara**, Lorenzo Díaz-Jiménez, Carlos I. Pérez-Rostro

**THE EFFECT OF THE SOURCE OF DIETARY CAROTENE AND ENVIRONMENTAL COLOR ON THE BODY PIGMENATION OF THE CLOWN FISH *Amphiprion ocellaris***

11:40  **Dong Zhang**

**SEAHORSE AQUACULTURE: A SUSTAINABLE SOURCE OF MEDICINE**

12:00  **Mateusz Rawski**, Bartosz Kieronczyk, Jan Mazurkiewicz, Silvia Nogales-Mérida, Abdelbasset Benzertiha, Sanan Talibov, Damian Józefiak

**THE USE OF *Bacillus subtilis* PB6 IN SPINY SOFT-SHELL TURTLE *Apalone spinifera* AS FEED AND WATER SUPPLEMENT**
12:20  **Oluwatoyin Adebola**, Oluayo Bello-Olusoji, Oyedapo Fagbenro, Timothy Sabejeje
EFFICIENCY AND SELECTIVITY OF GILLNET MESH SIZES FOR ASSESSING FISH COMPOSITION OF EGBE WATER RESERVOIR, EKITI STATE, NIGERIA

12:40  **John Bostock**, Martyn Haines, John Birger Stav, Catherine Pons, Panos Christofiologianni, Dag Willmann, George Adrian Stoica, Steven McKilllop
SKILL DEVELOPMENT AND ACCREDITATION FOR CAGE-BASED AQUACULTURE: THE ERASMUS+ BlueEDU SECTOR SKILLS ALLIANCE

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**GENERAL CONTRIBUTED 1**
Sunday, August 26   11:20 - 12:40   Sully 3
Chair: Abdul Wahab

EFFECTS OF DIFFERENT DIETARY SELENIUM SOURCES ON GROWTH PERFORMANCE, LIVER AND MUSCLE COMPOSITION, ANTIOXIDANT STATUS, STRESS RESPONSE AND EXPRESSION OF RELATED GENES IN GILTHEAD SEABREAM *Sparus aurata*

11:40  **Viviana Rocca**, Florent Tarbouriech
RELAUNCHING THE TRADITIONAL SHELLFISH FARMING IN THE FRENCH SOUTH MEDITERRANEAN TO BOOST OYSTER AND MUSSEL QUALITIES AND THEIR BY-PRODUCTS TO A PREMIUM LEVEL

12:00  **Abdul Wahab**, M. Rahman, P. Reale, M. Dickson, M. Phillips
AQUACULTURE INTERVENTIONS IN THE COASTAL FISHING HOUSEHOLDS FOR REDUCING PRESSURE ON HILSA SHAD FISHERY

12:20  **Shahroz Mahean Haque**, Fariha Reza, Ratumoni Rumana, Huzzatul Islam, Russell J Borski, Hillary Egna
EFFECTS OF COMBINING SHING *Heteropneustes fossilis* AT DIFFERENT STOCKING DENSITIES ON PRODUCTION AND ECONOMIC BENEFITS OF KOI-CARP POLYCULTURE
COMMUNICATION TO SOCIETY
Sunday, August 26    11:20 - 15:10    Tiberiade
Chair: Mark Flaherty

11:20  Barry Costa-Pierce, Kristina Snuttan Sundell, David Fredriksson, Adam St. Gelais, Zach Miller-Hope, Holly Parker
OCEAN FOOD SYSTEMS: A TRANSDISCIPLINARY, ECOSYSTEMS ECOLOGY APPROACH TO MARINE AQUACULTURE

11:40  Justine Delette, Philippe Vallette, Francisco J. Franco Del Amo, Stefano Angelini, Florence Huron
MR.GOODFISH: A SUSTAINABLE SEAFOOD CONSUMPTION PROGRAMME

12:00  Marit Schei Olsen, Tonje Osmundsen
THE POWER OF PERCEPTIONS: IN SEARCH FOR SOCIAL ACCEPTANCE

12:20  Mark Flaherty, Gregor Reid, Thierry Chopin, Erin Latham
PUBLIC ATTITUDES TOWARDS MARINE AQUACULTURE IN CANADA: INSIGHTS FROM THE PACIFIC AND ATLANTIC COASTS

12:40  LUNCH

14:30  Isaac Ankamah-Yeboah, Jette Bredahl Jacobsen, Søren Boye Olesen, Max Nielsen, Rasmus Nielsen
IMPACT OF ANIMAL WELFARE AND ENVIRONMENTAL INFORMATION ON THE CHOICE OF ORGANIC FISH: EVIDENCE FROM GERMAN CONSUMERS

14:50  Patit Paban Halder
STUDY OF SOLVING THE UNEMPLOYMENT PROBLEM BY ORNAMENTAL FISHERY TRADE: AN OVERVIEW OF WEST BENGAL

FOOD AND VALUE CREATION FROM THE ATLANTIC OCEAN
Sunday, August 26    09:30 - 17:10    Joffre 5
Chair: Marta Iglesias

The Atlantic Ocean is a shared natural resource for many countries bordering the Atlantic Ocean from the Arctic to Antarctic, including the European Union’s outermost regions and other islands in the Atlantic Ocean that are most exposed to climate change, food scarcity and heavily dependent on sea-related activities.

International Research and Innovation cooperation opens the door for new avenues and opportunities for Global aquaculture, as recognised in the Galway Statement on Atlantic Ocean Cooperation (2013) and the Belém Statement on Atlantic Ocean Research Cooperation (2017).
This workshop will bring our cooperation in this promising sector to the next level of ambition focusing on already identified key common areas of interest discussed at the ‘A New Era of Blue Enlightenment’ Conference in Lisbon in July 2017.

Under the theme: ‘Food and Value Creation from the Atlantic Ocean’ together with our key partners, four key challenges for global food nutrition will be discussed from different angles (public perception, new technologies, sustainable production and climate variability) and recommendations will be identified for the way forward. Furthermore, new ways for cooperation will also be discussed and promoted.

We encourage you to share your views and engage in a lively dialogue to make the most out of this Atlantic Ocean cooperation for the aquaculture sector.

10:30  Registration and Welcome Coffee

11:00  Introductory remarks
- Sigi Gruber, Head of the Marine Resources Unit, Directorate-General for Research and Innovation, European Commission
- Belemane Semoli, Chief Director, Aquaculture and Economic Development, South Africa
- Andrei Polejack, General Coordinator for Oceans, Antarctica and Geosciences, Ministry of Science, Technology, Innovations and Communications - MCTIC, Brazil

Progress of work under the Galway Statement between Canada, the European Union and the United States
- Mike Rust, National Oceanic and Atmospheric Administration, United States
- Jay Parsons, Director Aquaculture, Biotechnology and Aquatic Animal Health Branch, Canada
- Sigi Gruber, Head of the Marine Resources Unit, Directorate-General for Research and Innovation, European Commission and Wojciech Wawrzynski, Horizon 2020 AORAC-SA project

Perspectives from FAO
- Matthias Halwart, Head of Aquaculture branch, Food and Agriculture Organization of the United Nations - “Global food and nutrition security from the oceans”

12:15  Panel discussions on scientific and societal challenges of food and value chain creation from the Atlantic Ocean

Chair rapporteur: Jacques Fuchs, retired official of the European Commission

Panel 1: Public perception on aquaculture products
Insights from Atlantic coastal countries illustrating the challenge/solutions:

- Denis Bailly, Horizon 2020 Respon-SEA-ble project - “Communicating aquaculture across the North-Atlantic”
- Eric Routledge, Brazilian Agricultural Research Corporation (EMBRAPA), Brazil
- Xenia Schneider, Horizon 2020 MARINA project – “Sustainable Aquaculture in the Atlantic through Responsible Research and Innovation”

Recommendations and way forward for cooperation.

13:00 Networking Lunch

14:00 Panel 2: New and emerging technologies to service societal needs and new value chains

Insights from Atlantic coastal countries illustrating the challenges/solutions:

- Ronaldo Cavalli, Federal University of Rio Grance (FURG), Brazil
- John Bolton, University of Cape Town, South Africa – “Integrated systems research”
- Philippe Potin, Horizon 2020 GENIALG project – “New value chain for cultivated marine algae”
- Trevor Telfer, Horizon 2020 TAPAS project – “Sustainable integrated systems and circularity”

Recommendations and way forward for cooperation

14:45 Panel 3: Ensuring sustainable aquaculture production

Insights from Atlantic coastal countries illustrating the challenge/solutions:

- Mark Cyrus, Department of Agriculture, Forestry and Fisheries (DAFF), South Africa – “New species and markets”
- Brett Macey, DAFF, South Africa – “One health approach to aquatic animal health management”
- Wagner Valenti, São Paulo State University (UNESP), Brazil
- Marieke Reuver, Horizon 2020 ParaFishControl project and Isabelle Arzul, Horizon 2020 VIVALDI project – “Animal disease control”

Recommendations and way forward for cooperation

15:30 Networking Coffee Break

15:45 Panel 4: Climate variability and ecosystem approach to aquaculture

Insights from Atlantic coastal countries illustrating the challenge/solutions:

- João Gomes Ferreira, Horizon 2020 CERES project – “Impact and adaptation of climate change”
- Additional speakers from Brazil and South Africa tba

Recommendations and way forward for cooperation

16:30 New ways of cooperation:
Reinforce industrial partnership - mirroring the European Aquaculture Technology and Innovation Platform
**VALUE CHAIN ECONOMICS**  
Sunday, August 26  11:20 - 17:10  Barthez  
Chair: Sigurdur Bogason

11:20  **Panagiotis Efstathiou**, Evagelia Kouskouni, Paraskevi Karlovasiti, Zacharoula Manolidou, Ekaterina Karageorgou, Andreas Efstathiou  
**HEALTH AND ECONOMIC BENEFITS OF COPPER ALLOY MESH (CAM) USE IN AQUACULTURE**

11:40  **Gregor Reid**, Helen Gurney-Smith, Amber Garber, Duncan Knowler, David Marcogliese, Thierry Chopin, Kathy Brewer-Dalton, Richard Moccia, Mark Flaherty, Ian Forster, Caitlin Smith, Sena De Silva  
**CLIMATE CHANGE AND AQUACULTURE: CONSIDERING BIOLOGICAL RESPONSE AND RESOURCES**

12:00  **Manoel Xavier Pedroza Filho**, Vinícius Souza Ribeiro  
**PERFORMANCE ANALYSIS OF GLOBAL VALUE CHAINS: A PROPOSAL OF INDICATORS FOR AQUACULTURE IN BRAZIL**

12:20  **Dimitar Taskov**, Francis Murray  
**STRUCTURE AND PERFORMANCE OF THE UK MARINE NET-CAGE SALMONID AQUACULTURE INDUSTRY**
12:40  LUNCH

14:30  Frank Asche, Geir Sogn-Grundvåg, Jimmy Young, Dengjun Zhang  
ECOLabelS AND PRODUCT LONGEVITY: THE CASE OF WHITEFISH IN UK  
GROCERY RETAILING

14:50  Muhammad Yahya, Frank Asche, Roy Endré Dahl  
TEMPORAL AND SPECTRAL VOLATILITY SPILLOVER DYNAMICS IN  
AQUACULTURE FISH MARKETS

15:10  Audun Iversen, Oystein Hermansen, Frank Asche, Ragnar Nystoyl  
SALMON PRODUCTION COSTS AND IT’S EXPLAINING FACTORS:  
A COMPARISON BETWEEN THE FIVE MAJOR PRODUCING COUNTRIES

15:30  Audun Iversen, Oystein Hermansen, Ragnar Nystoyl, Eirik Junge Hess  
ECONOMIC EFFECTS OF SEA LICE – AN ILLUSTRATION FROM NORWEGIAN  
SALMON FARMING

15:50  Majid Mohammad Nejad, Hajimohammad Shirmohammadli,  
Shahrbano Alami Rostami  
THE EFFECT OF WEIGHT CHANGES IN DRY MATTER, PROTEIN, FAT AND ASH  
AT SILVER CARP Hypopthalmichthys molitrix (VALENCIENNES, 1844)

16:10  Isaac Ankamah-Yeboah, Afjal Hossain, Max Nielsen, Badiuzzaman  
MARKET INTEGRATION BETWEEN FARMED AND WILD FISH SPECIES IN  
BANGLADESH

16:30  Venticia Hukom, Max Nielsen, Isaac Ankamah-Yeboah, Rasmus Nielsen  
HOW CAN WARM-WATER SHRIMP CONQUER THE COLD WORLD? A  
HEDONIC PRICE STUDY ON SHRIMP IN DANISH RETAIL SALE
FISHBOOST: FISH BREEDING AND GENETICS
Sunday, August 26  11:20 - 17:10  Louisville
Chair: Anna Sonneson

11:20  Anna Sonesson
OVERVIEW OF FISHBOOST AND BREEDING BASICS

11:40  Kasper Janssen
PROFITABILITY OF BREEDING PROGRAMS AND IMPLICATIONS FOR MANAGEMENT

12:00  Ross Houston
IMPROVEMENT OF DISEASE RESISTANCE TRAITS

12:20  Antti Kause
IMPROVEMENT OF PRODUCTION EFFICIENCY TRAITS

12:40  Anna Sonesson
MANAGEMENT OF INBREEDING

12:50  LUNCH

14:30  Beatriz Villanueva
GAINS IN BREEDING PROGRAMS FOR DISEASE RESISTANCE AND FEED EFFICIENCY

14:50  Ross Houston
GENOTYPING TECHNOLOGIES

15:10  Anna Sonesson
BENEFITS OF GENOMIC SELECTION

15:30  BREAK

15:50  Nikos Zampoukas
FP9 INFORMATION

16:10  Group Table Discussions on
RESEARCH NEEDS AND FUTURE CHALLENGES OF AQUACULTURE BREEDING
11:20 Daphné Chérel, Peter G. Beninger
OOCYTE ATRESIA IN CULTURED COMMON COCKLE Cerastoderma edule

11:40 Unai Aldalur, Leire Arantzamendi, Beñat Zaldibar, Izaskun Zorita
ASSESSMENT OF THE REPRODUCTIVE CYCLE AND PRESENCE OF PARASITES IN MOLLUSCS CULTURED IN OFFSHORE WATERS OF THE SOUTHEASTERN BAY OF BISCAY

12:00 Ana Gavrilovic, Jurica Jug Dujakovic, Ana Ljubicic
THE DEPENDANCE OF THE PRODUCTION CYCLE OF EUROPEAN FLAT OYSTER Ostrea edulis (LINNAEUS, 1758) ON THE TIME OF HATCHING

12:20 Fariborz Ehteshami, Nicholas Romano, Hossein Rameshi
EFFECT OF DIETARY POLYUNSATURATED FATTY ACIDS ON Pinctada margaritifera LARVAL GROWTH

12:40 LUNCH

14:30 Rebeca Moreira, Patricia Pereiro, Pablo Balseiro, Massimo Milan, Marianna Pauletto, Luca Bargelloni, Beatriz Novoa, Antonio Figueras
REVEALING Mytilus galloprovincialis TRANSCRIPTOMIC PROFILES DURING ONTOGENY

14:50 Réjean Tremblay
SETTLEMENT TRIGGER IN BLUE MUSSELS

15:10 Franck Lagarde, Annie Fiandrino, Martin Ubertini, Réjean Tremblay, Serge Mortreux, Claude Chiantella, Béatrice Bec, Cécile Roques, Delphine Bonnet, Ismaël Bernard, Hélène Cochet, Grégory Messiaen, Marion Richard, Emmanuelle Roque d’orbcastel, Stéphane Pouvreau, Christophe Lett
TROPHIC INTERACTIONS AND CONNECTIVITY STRUCTURE SPATIAL PATTERNS OF PACIFIC OYSTER RECRUITMENT IN A HEAVILY SHELLFISH FARMED MEDITERRANEAN LAGOON

15:30 Jacob Capelle, Marnix R. van Stralen
RESOURCE PROVISIONING FOR MUSSEL CULTURE IN THE NETHERLANDS: THE CHANGE FROM MUSSEL SEED FISHERY TO SEED MUSSEL COLLECTORS
15:50 **Rebecca Smith**, Andrew Jeffs
ASSESSING THE COMMERCIAL POTENTIAL FOR COLLECTION OF GREENSHELL™ MUSSEL SPAT IN THE HAURAKI GULF, NEW ZEALAND

16:10 **Jens Kjerulf Petersen**, Camille Saurel, Pernille Nielsen
EXPERIENCE WITH ON-BOTTOM MUSSEL CULTURE IN LOW TIDAL AREAS: THE LIMFJORDEN CASE STUDY

16:30 **Harvey Harbach**, Harry Palm
QUALITY VALIDATION OF THE BALTIC SEA MUSSEL *Mytilus edulis*-like BY FLESH WATER CONTENT

16:50 **Carolynn S. Culver**, Jonathan Davis, Andrew Kim, Art Seavey, Brent Vadopalas
ROCK SCALLOP CULTURE: TO CEMENT OR NOT TO CEMENT?

**FUNCTIONAL INGREDIENTS**
Sunday, August 26 11:20 - 17:10 Pasteur Auditorium
Chair: Figueiredo-Silva Claudia

11:20 **Marianne Nergård**, Victoria Valdenegro, Trygve Sigholt, Elisabeth Aasum, Alf S. Dalum, Gerrit Timmerhaus, Aleksei Krasnov
FISH ARE WHAT THEY EAT: KRILL EFFECTS ON COMPOSITION, HISTOPATHOLOGICAL CHANGES AND HEALTH MARKERS OF ATLANTIC SALMON *Salmo salar* L. GILLS

11:40 **Delano Dias Schleder**, Martina Blank, Felipe Nascimento Vieira, Edemar Roberto Andreatta, Leila Hayashi
NEW INSIGHTS ABOUT LIPID MODULATION ON PACIFIC WHITE SHRIMP FED DIFFERENT COMBINATIONS OF BROWN SEAWEEDS AND THEIR INVOLVEMENT IN WHITE SPOT DISEASE RESISTANCE

12:00 **Jurij Wacyk**, Daniela Ortiz, Alvaro Peña, Iliak Harmsen, Pablo Salgado
THE INCLUSION OF A GRAPE MARC EXTRACT MODULATES OXYGEN RADICAL ABSORBANCE CAPACITY (ORAC) AND BIOCHEMICAL PARAMETERS IN RAINBOW TROUT PLASMA

12:20 LUNCH
14:30 Nicola Pontefract, Eric Leclercq, Mark Rawling, Victoria Valdenegro, Mathieu Castex, Daniel Merrifield
EFFECT OF A SINGLE-STRAIN YEAST FRACTION ON ATLANTIC SALMON SKIN MUCOSAL BARRIERS AND SUSCEPTIBILITY TO SEA LICE

14:50 Mark Rawling, Eric Leclercq, Andrew Foey, Daniel Merrifield, Mathieu Castex
THE EFFECTS OF FEEDING A NOVEL MULTI-STRAINS YEAST FRACTION ON THE MUCOSAL IMMUNE RESPONSES OF RAINBOW TROUT *Oncorhynchus mykiss*

15:10 Nicola Pontefract, Mark Rawling, John Tinsley, Elizabeth Aasum, Mathieu Castex, Daniel Merrifield
DEVELOPMENT OF A HIGH THROUGHPUT REAL-TIME qPCR ASSAY TECHNIQUE FOR THE TARGETED GENE EXPRESSION ANALYSIS OF ATLANTIC SALMON *Salmo salar* MUCOSAL TISSUE RESPONSES

15:30 Silvia Torrecillas, Antonio Serradell, Alex Makol, Genciana Terova, E. Gini, Victoria Valdenegro, Tatiana Kalinowska, Marisol Izquierdo, Félix Acosta, Daniel Montero
DIETARY PREBIOTICS AND PHYTOGENICS IN LOW FISH MEAL AND FISH OIL BASED DIETS FOR EUROPEAN SEABASS *Dicentrarchus labrax*: AN EFFECTIVE TOOL TO BOOST MUCOSAL TISSUES HEALTH AND DISEASE RESISTANCE

15:50 Claudia Figueiredo-Silva, Mihai Sun, Dana Tomlinson, Terry L. Ward
TRACE MINERAL NUTRITION OF FISH AND SHRIMP: A SHORT REVIEW

16:10 Philipp Segler, Diana Siebert, Yang-Su Kim, Michael Schlachter, Henrike Seibel, Carsten Schulz
INOSINE-5-MONOPHOSPHATE AS A FEEDING STIMULANT CAN ENHANCE GROWTH PERFORMANCE IN ATLANTIC SALMON *Salmo salar* EXPOSED TO HANDLING STRESS

16:30 Torunn Forberg, Victoria Valdenegro, Kristian Sørebø, Elisabeth Aasum, Hanne Johnsen, Lill-Heidi Johansen, Heidi E. Mikalsen
IMPROVING LUMPFISH *Cyclopterus lumpus* GROWTH AND ROBUSTNESS: EFFECTS OF REDUCED NUTRIENT DENSITY AND FUNCTIONAL ADDITIVES

16:50 Øystein Sæle, Angela Ros Etayo, Ivar Rønnestad, Kai Kristoffer Lie, Hoang T.M.D. Le
NUTRIENT SENSING IN THE INTESTINE – IMPACT ON PERISTALSIS AND THE TRANSCRIPTOME
11:20 Samuel A.M. Martin, Carola E. Dehler, Bertrand Collet, Pierre Boudinot
GENERATION OF SALMONID INTERFERON ATTENUATED CELL LINES BY
GENE EDITING USING CRISPR/CAS9 APPROACH

11:40 Delphine Lallias, Edwige Quillet, Nicolas Dechamp, Jean-Michel Calvez,
Marjorie Bideau, Lionel Goardon, Laurent Labbé, Mathilde Dupont-Nivet
ANALYSIS OF GENETIC VARIABILITY OF GLOBAL DNA METHYLATION IN
RESPONSE TO AN EARLY TEMPERATURE STRESS IN RAINBOW TROUT

12:00 Jingwei Liu, Huihua Hu, Stephane Panserat, Lucie Marandel
EXPRESSION PATTERNS OF DNA METHYLTRANSFERASE GENES DURING
GAMETOGENESIS AND EARLY DEVELOPMENT IN RAINBOW TROUT
Oncorhynchus mykiss

12:20 Atle M. Bones, Per Winge, Amit K Sharma, Charlotte Volpe, Marianne Nymark
GENOME EDITING OF MARINE MICROALGAE FOR CHARACTERIZATION AND
METABOLIC ENGINEERING

12:40 LUNCH

14:30 Richard Sayre, Elena Sineva, Susan Laramore, Tatiana Vinogradova-Shah
ENTERIC BACTERIA EXPRESSING dsRNA TARGETTING ESSENTIAL WSSV
GENES PREVENT WHITE SPOT SYNDROM VIRUS (WSSV) IN SHRIMP
Litopenaeus vannamei

14:50 Tarik Massucci Toledo, Ana Pavasovic, Christopher Collet, Peter Prentis
GENE EXPRESSION IN HEPATOPANCREAS AND TAIL MUSCLE ACROSS
MOULT STAGES OF THE REDCLAW CRAYFISH Cherax quadricarinatus

15:10 Krzysztof Jagiello, Marcin Polonis, Stefan Dobosz, Konrad Ocalewicz
MITOTIC AND MEIOTIC GYNOGENESIS AND TRIPLOIDIZATION OF THE
BROOK TROUT Salvelinus fontinalis AND EVALUATION OF THE OCCURING
MALFORMATIONS AFTER THOSE PROCESSES

15:30 Marcin Polonis, Krzysztof Jagiello, Stefan Dobosz, Konrad Ocalewicz
ANDROGENESIS IN RAINBOW TROUT Oncorhynchus mykiss – IONIZING
RADIATION (IR) – INDUCED REDUCTION OF EGG QUALITY?
15:50 Nermeen Abass, Rex Dunham
GROWTH OF GROWTH HORMONE cDNA TRANSGENIC CHANNEL CATFISH Ictalurus punctatus IS INFLUENCED BY CONSTRUCT PROMOTER TYPE, FAMILY LINE AND STRAIN

16:10 Han Liu, Hongliang Xu, Weimin Wang
RIBONUCLEASES 1 HAVE ANTIMICROBIAL FUNCTION BOTH IN VITRO AND IN VIVO IN BLUNT SNOUT BREAM Megalobrama amblycephala

BIODIVERSITY, CONSERVATION, ALIEN SPECIES
Sunday, August 26 14:30 - 17:10  Rondelet
Chairs: Fabrice Teletchea, Matthias Halwart

14:30 Fabrice Teletchea, Jean-Nicolas Beisel
HOW FISH AQUACULTURE PRODUCTION HAS EVOLVED IN THE PAST DECADES: TRUE SPECIES DIVERSIFICATION?

14:50 Matthias Halwart, Devin Bartley, Malcolm Beveridge, Simon Funge-Smith, Ruth Garcia Gomez, Daniela Lucente, Graham Mair, Chiara Sirani, Austin Stankus, Xiaowei Zhou, Zhiyi Zhang
THE STATE OF THE WORLD’S AQUATIC GENETIC RESOURCES

15:10 Øivind Bergh, Lars Asplin, Nina Sandlund, Anne D. Sandvik, Joao G. Ferreira, Nick Taylor
IMPACTS OF CLIMATE CHANGE ON NORTH EUROPEAN AQUACULTURE

15:30 Sylvie Lapègue, Serge Heurtebise, Jean-Baptiste Lamy, Florence Cornette, Lionel Dégremont, Emilie Flahauw, Mélodie Chapat, Pierre Boudry, Nicolas Bierne, Pierre-Alexandre Gagnaire
THE PACIFIC AND THE PORTUGUESE CUPPED OYSTERS, A PAIR OF SEMI-ISOLATED SPECIES AS GENOMIC RESOURCES FOR SHELLFISH AQUACULTURE

15:50 Amit Savaya-Alkalay, Papa Demba Ndao, Nicolas Jouanard, Assaf Barki, Eliahu D. Aflalo, Amir Sagi
REPRODUCTIVE BARRIERS BETWEEN MACROBRACHIUM SPECIES PERMIT SUSTAINABLE AQUACULTURE AND BIOCONTROL OF SCHISTOSOMIASIS IN AFRICA

16:10 Sahar Mejri, Cameron Luck, Martin Riche, Paul Wills, Rejean Tremblay, Aaron Adams, Jon Shenker
GAINING BETTER INSIGHT INTO THE REPRODUCTIVE PHYSIOLOGY AND EARLY LIFE DEVELOPMENT OF BONEFISH Albula vulpes
16:30  **Ulyana Alexandrova**, Angelina Firsova, Marina Yaitskaya  
THE DEVELOPMENT OF THE REPRODUCTIVE SYSTEM OF AFRICAN CATFISH  
*Clarias gariepinus* IN RAS

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**MICROBIAL AND MARINE ALGAE IN AQUAFEED**  
Sunday, August 26   14:30 - 17:10   Sully 2  
Chairs: Luisa Valente, Kjell Inge Reitan

14:30  **Kjell Inge Reitan**, Luisa M.P. Valente  
Short info about the two ERANET projects “Microbial raw materials as source for protein and EPA and DHA for use in aquafeed – MICRO-Feed” and “Improving Bio utilisation of Marine algae as sustainable feed ingredients to increase efficiency and quality of aquaculture production.

14:40  **Inga Marie Aasen**, Helga Ertesvåg, Tonje Bjerkan Heggeset, Olav Vadstein, Dominic Nanton, Hüseyin Sevgili  
PRODUCTION OF HETEROTROPHIC MICROORGANISMS FOR USE AS A SOURCE OF LONG-CHAIN OMEGA3 FATTY ACIDS IN AQUAFEED

14:55  **Helena Abreu**  
SEAWEED BIOMASS FOR AQUAFEEDS: AVAILABILITY AND DIFFERENTIATION FACTORS

15:10  **Xinxin Wang**  
MICROALGAE AS FEED SOURCE FOR AQUACULTURE: INFLUENCE OF ENVIRONMENTAL FACTORS ON LIPID AND PROTEIN COMPOSITION

15:30  **Olav Vadstein**, Helga Ertesvåg, Marianne Nymark  
MICROBES AS PRODUCTION ORGANISMS OF DHA/EPA: THE NEED FOR STRAIN IMPROVEMENT

15:50  **Luisa M.P. Valente**, Sónia Batista, M. Manuela E. Pintado, Flemming Jessen, Francesca Tulli  
BIO-UTILISATION OF MACRO- AND MICROALGAE IN EUROPEAN SEA BASS AFTER TECHNOLOGICAL PROCESSING

16:10  **Hüseyin Sevgili**, İsa Aydın, Adem Kurtoğlu, Özgür Aktaş, Faruk Pak, Inga. M. Aasen, Kjell Inge Reitan, Miachael Sandmann, Matilde Skogen Chauton, Gamze Turan, Mahir Kanyilmaz  
*Thraustochytrids, Phaeodactylum tricornutum AND Nannochloropsis oculata* IN DIETS OF JUVENILE EUROPEAN SEA BASS *Dicentrarchus labrax*
16:30 Solveig L. Sørensen, Ateshm Ghirmay, Yangyang Gong, Dalia Dahle, Ghana Vasanth, Mette Sørensen, Viswanath Kiron
INTESTINAL HEALTH OF ATLANTIC SALMON *Salmo salar* FED WITH MICROALGAE *Nannochloropsis* AND *Tetraselmis*

16:50 Yangyang Gong, Mette Sørensen, Jorge Dias, Solveig L. Sørensen, Ghana K. Vasanth, Dalia Dahle, Viswanath Kiron
EFFECT OF FEED ADDITIVES ON THE UTILIZATION OF MICROALGAE *Nannochloropsis* sp. FED TO ATLANTIC SALMON *Salmo salar*

**FOOD SAFETY**
Sunday, August 26  15:30 - 17:10  Sully 1
Chair: Turker Bodur

15:20 Melony Sellars, Jeff Cowley, Dean Musson, Min Rao, Moira Menzies, Brian Murphy
RNAi ANTIVIRALS FOR SHRIMP AQUACULTURE

15:40 Samwel M. Limbu, Li Zhou, Sheng-Xiang Sun, Mei-Ling Zhang, Zhen-Yu Du
CHRONIC EXPOSURE TO LOW ENVIRONMENTAL CONCENTRATIONS AND LEGAL AQUACULTURE DOSES OF ANTIBIOTICS CAUSE SYSTEMIC ADVERSE EFFECTS IN NILE TILAPIA *Oreochromis niloticus* AND PROVOKE DIFFERENTIAL HUMAN HEALTH RISK

16:00 Emmanuel Ogueji, Christopher Nwani, Stanley Iheanacho, Christian Mbah, Ogochukwu Okeke, Abubakar Yaji, Robert Onyeneke
OXIDATIVE STRESS, BIOCHEMICAL, LIPID PEROXIDATION AND ANTIOXIDANT RESPONSES IN *Clarias gariepinus* EXPOSED TO IVERMECTIN DRUG

16:20 Ayofe Mutalib Hammed, Fatai G. Owodeinde, Hakeem A. Fashina-Bombata, Oluwatoyin A. Salami
CHEMICAL AND MICROBIAL ASSESSMENT OF SOME FRESH WATER FISH SPECIES (*Tilapia zilli*, *Clarias gariepinus*, *Chrysichthys nigrodigitatus* AND *Sarotherodon melanotheron*) IN SELECTED AREAS OF LAGOS STATE, NIGERIA

16:40 Mohamed Mahmoud, Thorsten Tybussek, Mahmoud Magdy, Helene Loos, Maria Wagenstaller, Andrea Buettner
STATUS UPDATE ON MALODOR FORMATION AND ACCUMULATION SOURCES IN AQUACULTURE

17:00 Anis Somani, Heather Manuel
COMPREHENSIVE BENEFITS OF DEEPCHILL COOLING FOR SUPERIOR PRESERVATION AND YIELD GAIN IN SHRIMPS
VACCINES AND THERAPEUTANTS
Sunday, August 26 14:30 - 17:10 Einstein Auditorium
Chair: Laurent Dupuis

14:30 Chamilani Nikapitiya, H.P.S.U. Chandrarathna, S.H.S. Dananjaya, Mahanama De Zoysa, Jehee Lee
BACTERIOPHAGE IN THE CONTROL OF PATHOGENIC *E. tarda* IN CULTURED FISH

14:50 Samira Sarter
ONE HEALTH APPROACH ON ANTIMICROBIAL RESISTANCE AND THE PRUDENT USE OF ANTIBIOTICS IN FISH FARMING

15:10 Inácio Mateus Assane, Katia S. Gozi, Gustavo M.R. Valladão, Fabiana Pilarski
COMBINATION OF ANTIMICROBIALS AS AN APPROACH TO REDUCE THEIR USE IN AQUACULTURE: EXAMPLE OF USING THIAMPHENICOL WITH FLORFENICOL AGAINST *Aeromonas hydrophila*

15:30 Laurent Dupuis, Lauke Labrie
EXCIPIENTS IN AQUACULTURE MEDICATION: SURVEY, MECHANISMS OF ACTIONS AND PERSPECTIVES

15:50 Nermeen M. Abu-Elala, Ahmed Samir, Momtaz Wasfy, Magdy Elsayed
EFFICACY OF NANO-ADJUVANTED IMMERSION STREPTOCOCCUS VACCINE IN NILE TILAPIA *Oreochromis niloticus* FINGERLINGS

16:10 Kartik Baruah, Peter Bossier
PLANT-DERIVED COMPOUNDS IN AQUACULTURE HEALTH MANAGEMENT: FROM THE MODES OF ACTION TO PRACTICAL APPLICATION

16:30 Chika Ikele, Bernard Mgbenka, Chioma Ikele
EVALUATION OF PARASITICIDAL POTENTIALS OF *Moringa oleifera* ON THE CONTROL OF *Ichthyophthirius multifilis* AND ITS KEY LIFE STAGE “THERONTS” ON *Clarias gariepinus* JUVENILES

16:50 Sven M. Bergmann, Matthias Reichert, Christoph Lindenberger, Günter Kotterba, Rainer Buchholz
ANTIVIRAL SUBSTANCES OBTAINED FROM ALGAE USED TO COMBAT AGAINST THE KOI HERPESVIRUS DISEASE (KHVD)
Tilapia
Sunday, August 26 14:30 - 17:10 Tiberiade
Chair: Hugues de Verdal

14:30 Kouadio Nanan Kouamé Félix, Gnabro Ouakoubo Gaston, Aboya Narcisse
STRATEGIES FOR THE MANAGEMENT OF TILAPIA ALEVINS Oreochromis niloticus OF BRAILLOUS ORIGIN FOR SUSTAINABLE DEVELOPMENT OF CULTURE OF FISH IN IVORY COAST

14:50 Joachim Kuzimbila Yongo
NUTRITION, A LIMITING FACTOR FOR PERFORMANCE, WEIGHT GAIN, TILAPIA STRAINS HIGH IN SUB-SAHaran AFRICA: CASE OF PEASANT FARMING IN THE WEST OF THE DRC

EFFECT OF DIETARY PROTEIN TO ENERGY RATIO ON PERFORMANCE OF NILE TILAPIA AND FOOD WEB ENHANCEMENT IN SEMI-INTENSIVE POND AQUACULTURE

15:30 Heba Abdel-Ghany, Mohamed Salem
DIETARY ORANGE PEEL AS A GROWTH PROMOTER FOR NILE TILAPIA Oreochromis niloticus

15:50 Sara Picón-Camacho, Corinne Pichou, Peter Zeddah, Alain Le Breton
PHYLOGENETIC COMPARATIVE STUDY AND POPULATION STRUCTURE TROUGH GENOMIC ANALYSIS OF Streptococcus agalactiae STRAINS ISOLATED FROM AFRICAN TILAPIA FISH FARMS

16:10 Andrea Elena Pizarro Muñoz, Renata Barroso
ECONOMIC VIABILITY OF TILAPIA FARMING IN NORTHEAST BRAZIL

16:30 Ting-Bao Yang, Yin-Yin Zhou, Shuai Zhang
MONOGENEAN SPECIES OF TILAPIAS IN CHINA AND ECOLOGY OF SOME SPECIES IN EXPERIMENTAL SYSTEM

16:50 Regina Edziyie, Stephen Gyamfi, Kwasi Obirikorang, Emmanuel Frimpong, Daniel Adjei-Boateng
ZOOPLANKTON POPULATIONS IN TILAPIA PONDS FED WITH DIFFERENT DIETS
14:30 **Reginald Blaylock**, Adam Daw, Eric Saillant
THE EFFECT OF TEMPERATURE ON THE LIFE SPAN AND REPRODUCTION OF THE COPEPOD *Parvocalanus crassirostris*

14:50 **Maren Gagnat**, Taisuke Iizuka, Osamu Takaoka, Björn Ronge, Shukei Masuma
CULTIVATED COPEPODS *Acartia tonsa* IMPROVE SURVIVAL FIVEFOLD AND GROWTH THREEFOLD IN JAPANESE YELLOWTAIL *Seriola quinqueradiata*

15:10 **Øyvind J. Hansen**, Velmurugu Puvanendran, Jens P. Jøstensen, Elin Eidsvik, Atle Mortensen, Bjørn Ronge
EARLY INTRODUCTION OF COPEPODS AND DRY DIET DURING START FEEDING PERMANENTLY ENHANCES GROWTH IN FARmed ATLANTIC COD *Gadus morhua*

15:30 **Hilke Alberts-Hubatsch**, Jan Beermann, James Matthew Slater
FATTY ACID PROFILE OF MARINE AMPHIPODS FED TERRESTRIAL FEEDSTUFFS AND ITS IMPLICATIONS FOR AQUACULTURE

15:50 **Alaa El-Dahhar**
EFFECT OF FEEDING RATE ON SURVIVAL, GROWTH PERFORMANCE AND FEED UTILIZATION OF GILT HEAD SEA BREAM *Sparus urata* LARVAE DURING THE WEANING PERIOD

**EAS GENERAL ASSEMBLY**
Sunday, August 26  17:15 - 18:00  Sully 3
MONDAY, August 27

FUNCTIONAL INGREDIENTS - CONTINUED
Monday, August 27  09:00 - 10:40  Pasteur Auditorium
Chair: Figueiredo-Silva Claudia

09:00  Pierrick Kersanté, Guillaume Le Reste, Luxsanawadee Soonngam, Romain Le Hen, Joël Duperray
EFFECTS OF A SUSTAINABLE MIX OF FREE AMINO ACIDS ON FEED INTAKE IN WHITE SHRIMP *Litopenaeus vannamei* JUVENILE REARED IN AQUARIUM

09:20  Norhan E. Saleh, Elham A. Wassef, Ahmed M. Ashry
EVALUATION OF TAURINE AS A FEED ADDITIVE IN SEA BASS *Dicentrarchus labrax* DIET

09:40  Alvaro Rodriguez, Cristina Garcia, Antonio Martinez, Gustavo Espelleta
EFFECT OF COMPLEMENTARY FEED WITH EMULSIFIERS PROPERTIES ON THE GROWTH PERFORMANCE AND NUTRIENT UTILISATION IN EUROPEAN SEA BASS *Sparus aurata*

10:00  Vincent Fournier, Mikael Herault, Kyeong-Jun Lee
NUTRITIONAL AND HEALTH PERFORMANCES OF DIETARY SHRIMP HYDROLYSATE AND KRILL MEAL IN RED SEABREAM *Pagrus major* FED LOW FISH MEAL DIET

AQUACULTURE AND PROSPECTIVE
Monday, August 27  09:00 - 12:50  Sully 3
Chair: Denis Lacroix

09.00  Denis Lacroix
INTRODUCTION

09.15  Satchi Kaushik
INDIA

09.35  Kangsen Mai
CHINA
09.55  Patrick Sorgeloos  
VIETNAM

10.15  Geir Lasse Taranger  
NORWAY

10.35  BREAK

10.50  Sherif Sadek  
EGYPT

11.10  Leonidas Papacharisis  
GREECE

11.30  Wagner Cotroni Valenti  
BRAZIL

11.50  ROUND TABLE  
Questions from the audience  
Recommendations for common research priorities for aquaculture, in the world at 2040

SEA CUCUMBER, SEA URCHINS, POLYCHAETES  
Monday, August 27    09:00 - 12:50    Tiberiade  
Chair: Luisa Valente

09:00  Mark Cyrus, Brett Macey, Donia Wozniak, Sebastiaan de Vos, John Bolton  
IMPROVING LARVAL PRODUCTION OF THE COMMERCIALY IMPORTANT SEA URCHIN Tripneustes gratilla: SETTLEMENT, METAMORPHOSIS AND POST-SETTLEMENT SURVIVAL

09:20  Leonardo Mantilla-Aldana, Estefania Pereira-Pinto, Pedro Campoy-López, Ricardo Beiras  
NEW APPROACH TO A QUANTITATIVE METHOD TO ESTIMATION OF THE GAMETOGENIC CONDITIONS IN THE EDIBLE SEA URCHIN Paracentrotus lividus BY IMAGE ANALYSIS

GONAD QUALITY AND SAFETY OF TWO WILD POPULATIONS OF SEA URCHIN Paracentrotus lividus HARVESTED IN THE NORTH ATLANTIC COAST (PORTUGAL)
10:00  **Barbara Loi**, Edoardo Demuru, Gianni Brundu, Maura Baroli, Gemma Giménez Papiol, Andrea Di Biase, Alessio Bonaldo
THE INFLUENCE OF DIET ON GONAD QUALITY IN THE SEA URCHIN *Paracentrotus lividus*

10:20  **Sílvia Lourenço**, Ricardo José, Carlos Andrade, Luisa M.P. Valente
GROWTH PERFORMANCE OF SEA URCHIN *Paracentrotus lividus* FED DIETS WITH INCREASING PROTEIN LEVELS

10:40  **BREAK**

11:10  **Filipa Rocha**, Luís F. Baião, Tiago Sá, Luisa M. P. Valente
DIETARY CAROTENOIDS CAN AFFECT GONAD COLOUR OF SEA URCHIN *Paracentrotus lividus*

11:30  **Haiqing Wang**, Inka Seekamp, Arne Malzahn, Andreas Hagemann, Ana Karina Carvajal, Rasa Slizyte, Inger Beate Standal, Aleksander Handå, Kjell Inge Reitan
NUTRITIONAL COMPOSITION OF THE POLYCHAETE *Hediste diversicolor* CULTIVATED WITH LAND-BASED AQUACULTURE WASTE: A POTENTIALLY SUSTAINABLE FEED

**SELECTION AND BREEDING PROGRAMMES**
Monday, August 27    09:00 - 12:50    Joffre 5
Chair: Matias Medina

09:00  **Atle Mortensen**, Øyvind J. Hansen, Richard Johansen, Tove Hansen, Velmurugu Puvanendran
RESULTS FROM THE NATIONAL COD BREEDING PROGRAM BRINGS NEW HOPE FOR COMMERCIAL FARMING OF ATLANTIC COD *Gadus morhua* IN NORWAY

09:20  **Anastasia Bestin**, Ana Acín Perez, Frédéric Cachelou, Daniel Guémené, Pierrick Haffray
VERY HIGH GENETIC CORRELATION FOR EGG PRODUCTION TRAITS BETWEEN TWO SUCCESSIVE SPAWNING IN RAINBOW TROUT
09:40 Pierrick Haffray, Anastasia Bestin, Florian Enez, Sébastien Courant, Daniel Guémené, Alexandre Desgranges, François Allal, Mathilde Dupont-Nivet, Marc Vandeputte
GENETIC PARAMETERS OF RESISTANCE TO GASTROENTERITIS (RTGE) AND RAINBOW TROUT FRY SYNDROME (RTFS) IN RAINBOW TROUT Oncorhynchus mykiss AND THEIR GENETIC CORRELATIONS WITH PRODUCTION TRAITS

10:00 Hugues de Verdal, Marc Vandeputte, Catherine M. O’Connell, Marie-Laure Bégout, Wagdy Mekkawy, Béatrice Chatain, John A.H. Benzie
MEASURING INDIVIDUAL FEED EFFICIENCY AND ITS CORRELATIONS WITH PERFORMANCES AND AGONISTIC BEHAVIOURS IN JUVENILE NILE TILAPIA Oreochromis niloticus REARED IN GROUPS

10:20 Serean Adams, John Smith, Robin Tervit, Lindsay McGowan, Samantha Gale, J. Taylor, Carol Peychers, Ellie Watts, Julien Vignier
GREENSHELL™ MUSSEL Perna canaliculus SPERM CRYOPRESERVATION: APPLICATION IN SELECTIVE BREEDING

10:40 BREAK

11:10 Maud Alix, Eva Blondeau-Bidet, Evelyse Grousset, Ainaz Shiranghi, Alain Vergnet, Bruno Guinand, Béatrice Chatain, Viviane Boulo, Jehan-Hervé Lignot
EFFECTS OF FASTING AND REFEEDING ON THE DIGESTIVE PHYSIOLOGY OF SELECTED SEA BASS POPULATIONS

11:30 Mathieu Besson, François Allal, Béatrice Chatain, Alain Vergnet, Frédéric Clota, Marc Vandeputte
SELECTIVE BREEDING ON TOLERANCE TO FASTING IMPROVES FEED CONVERSION RATIO OF SEA BASS

11:50 John Buchanan, America Fujimoto, Tiago Hori, Melissa Allen, Jason Stannard
DEVELOPMENT OF A LOW-DENSITY SNP MARKER PANEL IN PACIFIC WHITE SHRIMP Penaeus vannamei FOR APPLICATION IN PARENTAGE ASSIGNMENT, DETECTION OF INBREEDING, AND DIVERSITY ASSESSMENT
BIO-FLOC SYSTEMS
Monday, August 27    09:00 - 12:50    Sully 1
Chair: Yoram Avnimelech

09:00  Peter Bossier, Yoram Avnimelech
LINKING FLOC CHARACTERISTICS TO OPERATIONAL PARAMETERS

09:20  Carlos Pérez-Rostro, Alfredo Gallardo-Colli, Martha Hernandez-Vergara, Manuel Perez-Fuentes
COMPENSATORY GROWTH OF NILE TILAPIA Oreochromis niloticus
SUBJECTED TO CYCLIC FASTING AND RE-FEEDING PERIODS IN BIOFLOC SYSTEM

09:40  Felix Sugantham, S. Ezhilmathi, A. Gopalakannan, M. Menaga
BIOAVAILABILITY OF CRUDE PROTEIN AND LIPID FROM BIOFLOC BASED FEED NUTROFLOC IN INTENSIVE NURSERY CULTURE OF Penaeus vannamei

10:00  Nyan Taw
INTENSIVE SHRIMP FARMING SYSTEMS IN ASIA: COMMERCIAL IMPLEMENTATION OF BIOSECURE AND BIOFLOC PRODUCTION SYSTEMS TO HELP CONTROL SHRIMP FARMING DISEASES

10:20  Adolfo Jatobá, Joana Hübner, Filipe Antunes da Silva, Esmeralda Chamorro Legarda, Felipe do Nascimento Vieira
GROWTH PERFORMANCE OF AMAZON RIVER PRAWN REARED IN BFT

10:40  BREAK

11:10  Felipe do Nascimento Vieira, Esmeralda Legarda, Marco Lorenzo, Matheus Martins, Moisés Poli
PACIFIC WHITE SHRIMP AND NILE TILAPIA INTEGRATION IN BIOFLOC SYSTEM UNDER DIFFERENT FISH-STOCKING DENSITIES

11:30  Vicente Ernesto, Azmina Goulamaly, Francois Grosse, Yoram Avnimelech
BIOFLOC TECHNOLOGY AS A MEANS TO RECOVER SHRIMP FARM IN MOZAMBIQUE

11:50  Barbara Hostins, Wilson Wasielesky, Geert Rombaut, Dionéia Cesar, Olivier Decamp, Peter Bossier, Peter De Schryver
MANAGING BIOFLOCS OPERATIONAL PARAMETERS MINIMIZES THE RISK FOR HEPATOPANCREATIC NECROSIS DISEASE (AHPND) OUTBREAKS
12:10  Marc Verdegem, Samara Hutting, Joost van Loo, Johan Schrama, Johan Verreth
MICROORGANISMS IN BIOFLOCS MAKE UNAVAILABLE PHOSPHATE, FIXED IN DIETARY PHYTATE, AVAILABLE FOR NILE TILAPIA

12:30  Eric De Muylder
ADVANTAGES AND DISADVANTAGES OF ADDING CARBON IN INTENSIVE CULTURE OF *Litopenaeus vannamei* WITH BIOFLOCS

12:50  LUNCH

14:30  Wilson Wasielesky, Nathalia Santos, Plínio Furtado, Dionéia César
EVALUATION OF THE USE OF BIOBALLS IN THE NITRIFICATION PROCESS OF PACIFIC WHITE SHRIMP *Litopenaeus vannamei* BIOFLOC TECHNOLOGY CULTURE SYSTEM

14:50  Yoram Avnimelech
SUSPENDED OR LOCALIZED BIOFLOC SYSTEMS: DEFINITION, DATA AND NEED FOR FURTHER RESEARCH

**AGRICULTURE / AQUACULTURE CIRCULAR**
**CO-PRODUCTION AND ECO-INTENSIFICATION**
**Monday, August 27  09:00 - 15:10     Sully 2**
**Chair: Lionel Dabbadie**

09:00  Olivier M. Joffre, Laurens Klerkx, Devi Hermsen, Kazi Ahmed Kabir, Tran Huu Tinh, Marc Verdegem
NUTRITIOUS POND CONCEPT, A PATHWAY TO SUSTAINABLE INTENSIFICATION OF AQUACULTURE SYSTEMS?

09:20  Sherif Sadek, Valerio Crespi
EFFICIENT USE OF RESOURCES FOR THE SUCCESSFUL DEVELOPMENT OF AQUACULTURE IN THE DESERT AND ARID LANDS

09:40  Alan Kennedy, Alexandre Tahar, Ronan Cooney, Sarah Naughton, Conor Behan, Andy Fogarty, Richard Fitzgerald, Neil Rowan, Eoghan Clifford
MOREFISH – ENHANCING PRODUCTION AND SUSTAINABILITY IN IRISH FRESHWATER AQUACULTURE

10:00  Alexandre Tahar, Alan Kennedy, Ronan Cooney, Sarah Naughton, Conor Behan, Emer O'Neil, Siobhan Kavanagh, Neil Rowan, Eoghan Clifford
SUPPORTING THE SUSTAINABLE DEVELOPMENT OF THE IRISH FRESHWATER AQUACULTURE INDUSTRY
10:20 Amon P. Shoko, Eusebia E. Ulotu, Salome D. Shayo, Mathew O. Silas, Sloans Chimatiro, Nazael Madalla, Rashid Tamatamah
A VALUE CHAIN ANALYSIS OF AQUACULTURE INDUSTRY IN TANZANIA: THE CASE OF FEEDS AND SEEDS AND IMPLICATIONS FOR SECTOR GROWTH

10:40 BREAK

11:10 Elyne Dugény, Bruno Petton, Fabrice Pernet
THE INFLUENCE OF SURROUNDING SPECIES ON THE DISEASE RISK OF THE PACIFIC OYSTER Crassostrea gigas

11:30 Majid Mohammad Nejad, Hajimohammad Shirmohammadadli
THE POSSIBILITY OF RAISING Rutilus rutilus caspicus AND Rutilus frisii kutum TOGETHER

11:50 Nepheronia Ogburn, Suresh Ramraj Subashchandrabose, Damian M. Ogburn, Wayne O’Connor, Megharaj Mallavarapu
COMMERCIAL Artemia BIOMASS PRODUCTION SYSTEM USING DISTILLERY AND WINERY WASTES IN AUSTRALIA BASED ON PHILIPPINES PARADIGM

12:10 Konstantin D. Matishov, Tatiana S. Gridina, Yliana S. Aleksandrova
INFLUENCE OF THE MICROBIOLOGICAL PREPARATION ON AGRICULTURAL CROPS PRODUCED TOGETHER WITH THE HYDROBIONTS VIA AQUAPONIC METHOD IN THE FLOOR-TYPE SYSTEMS

12:30 Türker Bodur, Esra Okudur
COMPARISON OF GROWTH RATES OF SOME PLANTS IN HYDROPONICS AND AQUAPONICS

12:50 LUNCH

14:30 Daniele Brigolin, Mateja Slovenc, Andrea Alberto Forchino, Ana Slanatar, Lara Pozzato, Marco Francese, Patricija Pirnat, Andrej Udovc
THE INTERREG ITALY-SLOVENIA PROJECT BLUEGRASS: SUSTAINING AQUAPONICS DEVELOPMENT IN THE AREA

14:50 Lidia Robaina, Carlos Andrade, Angela M. Pereira Barreto da Veiga Moreno, Carmen Florido de la Nuez, Francisco López del Pino, Marta Jacob Escuariza, Carlos Rodríguez Robaina, Raquel Quiros Pozo, Anaís Ventura Castellano, Sara Ramírez-Bolaños, Juan A. Jiménez Rodríguez, Mariano Chirivella Caballero, Priscila Velázquez Ortuzo, Vanesa Raya Ramallo, Jose A. Haroun Tabraue, José Manuel Pérez Alemán, Eduardo Portillo Hahnefeld
R+iD+i TOWARDS AQUAPONIC DEVELOPMENT IN THE UP ISLANDS AND THE CIRCULAR ECONOMY (ISLANDAP - INTERREG MAC/1.1 a/207) -- FIRST COLLABORATIVE RESULTS
Food security and safety matter. The need for sufficient, safe and nutritious food is rapidly growing on a global scale. Through multi-stakeholder collaboration and industry-driven innovation, European aquaculture has become a highly industrialised and knowledge-intensive sector, with the potential of contributing to the aims set in the “Food from the Oceans” report, the “Food2030” Initiative, and challenges such as the ‘Clean oceans’ related mission presented in the Mazzucato report. The European Research and Innovation Programmes support a range of actions that promote biological, technological and socio-economic developments in aquaculture. These comprise both excellent research, close-to-market innovations, state-of-the-art research infrastructures, capacity building and international collaboration.

As a joint effort, the European Commission and EATiP are setting focus on the impact of European research for the benefit of aquaculture development within Europe as well as worldwide. Through three consecutive sessions, they present some major outcomes of technology and innovation efforts that contribute to tackle the bottlenecks and opportunities in aquaculture towards the overall goal of ensuring food and nutrition security.

09:00  Alexandra Neyts, EATiP
Welcome by the EATiP

09:05  SESSION 1 – Setting the scene: How can more food and biomass be obtained from aquaculture in a way that maximises the benefits for future generations?
Chair and moderator: Sigi Gruber, DG RTD

Opening and introduction of the session, Sigi Gruber, DG RTD
- Lorella de la Cruz Iglesias, DG MARE
- TOWARDS A SUSTAINABLE AND COMPETITIVE EUROPEAN AQUACULTURE SECTOR: CURRENT STATUS AND FUTURE CHALLENGES
- Karen Fabbri, DG RTD
- FOOD 2030: AQUACULTURE AS A NEW FRONTIER FOR FOOD PRODUCTION
- Gustavo Larrazábal, EATiP
- EATiP: RESEARCH AND DEVELOPMENT AS A DRIVER FOR ACHIEVING THE SECTORS VISION FOR GROWTH
09:20 Carina Keskitalo, European Commission’s Group of Chief Scientific Advisors
THE ROLE OF MARICULTURE IN PROVIDING MORE FOOD AND BIOMASS FROM THE OCEANS: THE FOOD FROM THE OCEANS SCIENTIFIC OPINION

09:30 Tom Redd, JPI Oceans
AQUACULTURE IN 2037 – A BACKCASTING FORESIGHT EXERCISE

09:40 Jon Arne Grøttum, Norwegian Seafood Federation
SEAFOOD 2030 – THINK GLOBALLY, ACT LOCALLY. A CASE FOR SUSTAINABLE AQUACULTURE GROWTH

09:50 Katerina Moutou, University of Thessaly, Greece
FORMULATE AND POSITION RESEARCH NEEDS IN FOOD 2030

10:00 Marc Vandeputte, INRA
AQUAEXCEL 2020 – RESEARCH INFRASTRUCTURE KNOWLEDGE OUTPUTS WITH IMPACT

10:10 Arthur Rigaud, FARNET
AQUACULTURE RELATED FLAG PROJECTS

10:20 Panel discussion – Moderator: Sigi Gruber
POSITIONING THE ROLE OF AQUACULTURE IN FOOD SECURITY, PUBLIC HEALTH AND CLIMATE CHALLENGES

10:40 COFFEE BREAK

11:10 SESSION 2 – Aquaculture 4.0: automation, precision farming and data systems
Chair and Moderator: Synnøve Helland, EATiP

Introducing the session, Synnøve Helland, EATiP

11:20 Frank Børre Pedersen, DNV-GL
DIGITALISATION AND BLOCKCHAIN AS TOOLS FOR BUILDING TRUST IN FUTURE AQUACULTURE

11:30 Martin Føre, SINTEF
E-INFRASTRUCTURE SUPPORTING VIRTUAL AQUACULTURE EXPERIMENTS

11:40 Jean-Yves Lebras, CLS
INNOVATIVE SERVICES TO MONITOR SPATIAL DISTRIBUTION OF AQUACULTURE ACTIVITIES
11:50 **Project presentations** with focus on impact: how will the project results influence aquaculture developments?  
*Horizon 2020 projects:*
- SPG – Horizon 2020 SME instrument (Stein Åge Davidsen, SFD Seafarm Development)  
- CERES, Horizon 2020-funded project (Pauline Kamermans, Wageningen Marine Research)  
- Q&A

12:20 **Panel Discussion** – Moderator: Synnøve Helland, EATiP

12:50 **LUNCH BREAK**

14:00 **SESSION 3 – Sustainable global aquaculture**  
*Chair and Moderator: Patrick Lavens, EATiP*

**Introducing the session**, Patrick Lavens, EATiP

14:10 **Patrick Lavens**, EATiP **Denis Bailly**, University of Brest, Respon-SEA-ble, Horizon 2020 EU-funded project  
**COMMUNICATING AQUACULTURE ACROSS THE NORTH-ATLANTIC**

14:20 **David Basset**, EATiP  
**TOWARDS A WIN-WIN COOPERATION IN GLOBAL AQUACULTURE**

14:30 **Sigi Gruber**, DG RTD  
**FEEDBACK FROM ONGOING WORK IN DIFFERENT EUROPEAN SEA BASINS**

14:40 **Project presentations** with focus on impact: how will the project results influence aquaculture developments?  
*List of projects:*
- SYLFEED – Horizon 2020-Bio based industries Joint Undertaking (Amélie Drouault, Arbiom SAS)  
- Genialg, Horizon 2020 EU-funded project (Philippe Potin, Sorbonne University)  
- Q&A

15:00 **Panel Discussion** – Moderator: Patrick Lavens, EATiP  
**HOW TO PROMOTE INTERNATIONAL COLLABORATION IN A COMPETITIVE MARKET?**

15:20 Wrap-up and recommendations to feed in the FOOD 2030 initiative.

15:30 – **COFFEE BREAK**
SOCIO-ECONOMICS
Monday, August 27 09:00 - 17:10  Louisville
Chairs: Ragnar Tveterås, Frank Asche

09:00  Gesche Krause, Jose Perez Agúndez, Lucia Fanning, Cornelia Kreiß, Selina M. Stead, Nardine Stybel
APPLYING SOCIAL INDICATORS TO SUPPORT KNOWLEDGE TRANSFER FOR AQUACULTURE WITHIN THE “BLUE GROWTH STRATEGY”

09:20  Carole Engle, Jonathan van Senten
THE REGULATORY COST BURDEN ON U.S. AQUACULTURE FARMS

09:40  Meghna Sinha, Albiya Arshabi, Bibha Kumari, D.K. Paul
STUDY OF SOCIAL STATUS OF FISHING COMMUNITIES IN PATNA, INDIA

10:00  Henri-Joël Niamien K., Joseph Kaudhis K., Marc Oswald
GNANAGONFLA: ABOUT INVENTIVENESS OF FORGOTTEN LAND, AN EXAMPLE OF UNEXPECTED DEVELOPMENT OF MERCHANT FAMILY FISH FARMING

10:20  Ruth Pincinato, Atle Oglend, Renata Melon Barroso, Andrea Munoz
TAKING A RIDE WITH COD -- NORWEGIAN SALMON IN THE BRAZILIAN SEAFOOD MARKET

10:40  BREAK

11:10  Marianna Cavallo, Jose A. Perez Agundez
REVIEWING PUBLIC CONSULTATION MECHANISMS ENHANCING SOCIAL ACCEPTABILITY OF AQUACULTURE IN THE MEDITERRANEAN SEA

11:30  Katia Frangoudes, Maïwenn Paul
UNDERSTANDING THE ROOTS OF SOCIAL PROTESTS AGAINST MARINE FARMING DEVELOPMENT IN BRITTANY FRANCE

11:50  Cecile Brugère, Meryl Williams
WE R... WOMEN IN AQUACULTURE: OVERCOMING WOMEN’S INVISIBILITY AND GENDER INEQUALITIES IN AQUACULTURE

12:10  Rodrigue Yossa
MANAGING AQUACULTURE PROJECTS
12:30  **Cecile Brugere**, William Clark, K. Padmakumar
WHAT MOTIVATES FISH FARMERS’ CHOICE FOR FISH FEED IMPROVED WITH NON-CONVENTIONAL INGREDIENTS? INSIGHTS FROM THE THEORY OF PLANNED BEHAVIOUR, WITH AN APPLICATION TO POND FARMERS IN INDIA

12:50  **LUNCH**

14:30  **Anang Hari Kristanto**, Tri Heru Prihadi, Brata Pantjara, Jacques Slembrouck, Jean-Christophe Avarre
AN OVERVIEW OF AQUACULTURE IN INDONESIA

14:50  **Debib Rida**
THE COMPANY SPECIALIZES IN FISHING TO FIND COMPANIES SPECIALIZED IN AQUACULTURE TO BUY EQUIPMENT

15:10  **Thanasis Arvanitis**, Kostas Seferis, Nikos Theiakoulis, Konstantinos Bovolis, Tassos Sarigiannis
BLUE MINER CLOUD BASED PLATFORM FOR AQUACULTURE ANALYTICS

15:30  **Zifei Liu**
RESEARCH ON “THREE FISHERIES” DEVELOPMENT BASED ON THE RURAL VITALIZATION STRATEGY

15:50  **Rocio Robles**, Constantinos C. Mylonas
“DIVERSIFY”: EXPLORING THE BIOLOGICAL AND SOCIO-ECONOMIC POTENTIAL OF NEW/EMERGING CANDIDATE SPECIES FOR THE EXPANSION OF THE EUROPEAN AQUACULTURE INDUSTRY

16:10  **Yuko Onozaka**, Jonas Torrissen
ENVIRONMENTAL HALO EFFECTS AND CROSS-PRODUCTS PERCEPTION SPILLOVERS: A CASE OF FARMED SALMON AND WILD-Captured COD

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**WELFARE**
Monday, August 27  09:00 - 15:10  Antigone 3
Chair: Sonia Rey Planellas

09:00  **Ingrid Lein**, Jelena Kolarevic, Bjarne Gjerde, Åsa Marie Espmark
PERFORMANCE AND WELFARE IN BALLAN WRASSE *Labrus bergylta* AND LUMPFISH *Cyclopterus lumpus* REARED AT DIFFERENT LIGHT REGIMES

09:20  **Maureen A. Ellis**, Susan Jarvis, Sonia Rey, James F. Turnbull
THE USE OF ENVIRONMENTAL ENRICHMENT TO REDUCE FIN DAMAGE IN FARMED ATLANTIC SALMON *Salmo salar*
09:40  Peter Luft, Raphael Gebhard, Ralf Bochert  
ENCOUNTERING THE THERMAL PREFERENCE OF MARAENA WHITEFISH  
*Coregonus maraena* REARED IN AQUACULTURE

10:00  Malthe Hvas, Ole Folkedal, Frode Oppedal  
THE USE OF SWIM TUNNEL STUDIES IN DEFINING ENVIRONMENTAL  
THRESHOLDS FOR ATLANTIC SALMON AND CLEANERFISH IN EXPOSED  
AQUACULTURE

10:20  Lluis Tort, Ali R. Khansari, Mariana Teles, Joan C. Balasch, Eva Vallejos-Vidal,  
David Parra, Felipe Reyes-López  
THE VARIABILITY OF STRESS AND IMMUNE RESPONSES IN FISH  
SUBJECTED TO STRESSORS: EVIDENCES FROM PHYSIOLOGICAL AND  
GENOMIC DATA IN THREE MODEL SPECIES

10:40  BREAK

11:10  Sébastien Alfonso, Didier Leguay, Lucette Joassard, Christine Jarc,  
Xavier Cousin, Béatrice Chatain, Marie-Laure Bégout  
BEHAVIORAL AND PHYSIOLOGICAL RESPONSES TO HYPOXIA, HIGH TOTAL  
AMMONIA NITROGEN (TAN) CONCENTRATION IN EUROPEAN SEA BASS  
*Dicentrarchus labrax*

11:30  Bastien Sadoul, Isabelle Leguen, Sébastien Alfonso, Benjamin Geffroy,  
Béatrice Chatain, Patrick Prunet, Marie-Laure Bégout  
CONSISTENCY IN RISK TAKING TESTS THROUGHOUT LIFE AND  
CHALLENGING SITUATIONS

11:50  Sébastien Alfonso, Benjamin Geffroy, Bastien Sadoul, Lucette Joassard,  
Manuel Gesto, Béatrice Chatain, Marie-Laure Bégout  
STRESS COPING-STYLE IN EUROPEAN SEA BASS *Dicentrarchus labrax*:  
FROM GENES TO PHYSIOLOGY AND BEHAVIOUR

12:10  Iciar Martinez, Harkaitz Eguiraun, Oskar Casquero, Asgeir J. Sørensen  
FISH WELFARE: REDUCING THE NUMBER OF FISH IN EXPERIMENTS WITH  
SHOALING SPECIES

12:30  Daniel Wright, Tim Dempster, Lars Stien, Frode Oppedal  
TAGGING EFFECTS ON ATLANTIC SALMON IN DEPTH-MODIFIED CAGES

12:50  LUNCH

14:30  Mahmoud Eltholth, Sonia Rey, William Leschen, Simon Mackenzie,  
Radi Mohammed, Abdallah Salah, Ahmad Hamza, Wael Eltras, David Little  
PARTICIPATORY HEALTH MANAGEMENT STRATEGY DEVELOPMENT FOR  
AQUACULTURE IN EGYPT: A NOVEL APPROACH FOR POND DESIGN
14:50  Douglas Waley, Natasha Boyland, Krzysztof Wojtus
CONSUMER ATTITUDES TO FISH WELFARE IN EUROPEAN SOCIETY

MICRO AND MACRO ALGAE CULTURE
Monday, August 27  09:00 - 17:10  Einstein Auditorium
Chair: Aleksander Handa

09:00  Cecilia Biancacci, Gordon McDougall, John Day, Michele Stanley
THE APPLICATION OF A LAB SCALE PHOTOBioreactor FOR LABORATORY
CULTIVATION OF Osmundea pinnatifida

09:20  Henrice Jansen, Marit Nederlof, Ingrid Van der Meer, Adrie Van der Werf
PERFORMANCE OF FIVE ULVA STRAINS: PRODUCTIVITY, CHEMICAL
COMPOSITION AND NUTRIENT DYNAMICS AND SELECTION CRITERIA FOR
FARMING PRACTICES AND ECOSYSTEM INTERACTIONS

09:40  Ana Nobre, Luisa M.P. Valente, Maria H. Abreu, Rui Pereira, Amir Neori
DEMONSTRATION OF A NITROGEN BUDGET MODEL TO ASSESS WATER
RENEWAL RATES AND NITROGEN LIMITATION IN COMMERCIAL SEAWEED
FARMS

10:00  Jorunn Skjermo, Aires Duarte, Silje Forbord, Kristine Steinhovden,
Torfinn Solvang, Trond Storseth, Aleksander Handå
OPTIMIZING OF WINGED KELP Alaria esculenta HATCHERY CONDITIONS

10:20  Torfinn Solvang, Morten Omholt Alver, Emil Scott Bale
STANDARDIZED PRODUCTION OF KELP; FROM DEVELOPMENT OF
HATCHERY TOOLS TO THE SEAFARM CONCEPT SPOKe

10:40  BREAK

11:10  Silje Forbord, Guri Ellila Brodahl, Sanna Matsson, Jorunn Skjermo,
Ole Jacob Broch, Morten Omholt Alver, Torfinn Solvang, Saifullah Saifullah,
Kristine Braaten Steinhovden, Solveig Foldal, Yngvar Olsen, Aleksander Handå
A NORWEGIAN CULTIVATION PROGRAM FOR THE SUGAR KELP Saccharina
latissima
11:30  Sanna Matsson, Reinhold Fieler, Hartvig Christie, Silje Forbord, Bodil Bluhm, Anna Metaxas, Aleksander Handå  
BIOFOULING ON CULTIVATED KELP: REGIONAL AND LATITUDINAL VARIATION IN NORWAY

11:50  Ole Jacob Broch, Morten Omholt Alver, Trine Bekkby, Hege Gundersen, Aleksander Handå, Jorunn Skjermo, Kasper Hancke  
THE POTENTIAL FOR KELP *Saccharina latissima* CULTIVATION IN NORWAY

12:10  Kasper Hancke, Ole Jacob Broch, Trine Bekkby, Yngvar Olsen, Reinhold Fieler, Hege Gundersen, Morten Omholt Alver, Hartvig Christie  
POTENTIAL IMPACTS OF INDUSTRIAL-SCALE KELP FARMING ON COASTAL ECOSYSTEMS

12:30  Inga Marie Aasen, Ingrid Sandbakken, Michael Roleda, Jorunn Skjermo, Åshild Krogdahl  
PROCESSING OF BROWN ALGAE FOR UTILISATION AS ANIMAL AND FISH FEED, AND INTEGRATION OF THE PRODUCTION IN A SEAWEED BIOREFINERY

12:50  LUNCH

14:30  Corinna Dubischar, Maria Brandmann, Jan Tebben, Joachim Henjes, Tilmann Harder  
THE USE OF MICRO- AND MACROALGAE AS NUTRACEUTICALS, WITH SPECIAL EMPHASIS ON NEUROPROTECTIVE PROPERTIES OF ALGAL METABOLITES – PROJECT OUTLINE

14:50  Francisca Brito, Gabriela Sousa, Rui Pereira, Helena Abreu, Anake Kijjoa, Leonardo Magnoni  
ANTIOXIDANT POTENTIAL OF *Gracilaria* sp. AGAR EXTRACTION WASTE

15:10  Sander van den Burg, Ana Daniel, Ana Dias, Liliana Alves, Roel Helmes, Gohar Nuhoff-Isakhanyan  
TECHNO-ECONOMIC AND LIFE-CYCLE ASSESSMENT OF TWO NEW VALUE CHAINS FOR EUROPEAN SEAWEEDS

15:30  Natacha Nogueira, Nereida Cordeiro  
LIPID AND FATTY ACID COMPOSITION OF *Chlorella autotrophica* (CHLOROPHYTA) GROWN OUTDOORS IN TWO DIFFERENT PHOTOBIOREACTORS

15:50  Brett Macey, John J. Bolton, Kris de Jager  
MICROBIOME OF ULVA GROWN IN ABALONE EFFLUENT WATER: IS THEIR A DISEASE RISK ASSOCIATED WITH ITS USE AS AN AQUAFEED?
MOLLUSCS - CONTINUED
Monday, August 27   09:00 - 17:10   Antigone 1
Chair: Aad Smaal

09:00   Jasper van Houcke, Pim van Dalen, Wessel Bakhuizen, Jozef Linssen, Joop Luten
TAILOR-MADE SEAFOOD: OYSTER REFINEMENT AS A TOOL OF OVERCOMING CONSUMER BARRIERS

09:20   Leire Arantzamendi, Luis Lagos, Izaskun Zorita
EFFECT OF DENSITY ON THE GROWTH AND SURVIVAL OF PACIFIC OYSTER Crassostrea gigas REARED IN WATERS OF THE BASQUE COAST (SE BAY OF BISCAY)

09:40   Eva Hartog, Tony van der Hiele, Jacob Capelle, Pauline Kamermans
EFFECT OF INUNDATION TIME ON GROWTH, QUALITY AND SURVIVAL OF PACIFIC OYSTER Magallana gigas FOR SITE-SPECIFIC (OFF-BOTTOM) AQUACULTURE IN THE OOSTERSCHELDE, THE NETHERLANDS

10:00   Corinne Audemard, Tal Ben-Horin, Lisa Calvo, Kimberly Reece, Dave Bushek
INFLUENCE OF AERIAL EXPOSURE AT LOW TIDE ON CONCENTRATIONS OF HUMAN-PATHOGENIC VIBRIOS IN OYSTERS CULTURED IN THE INTERTIDAL ZONE

10:20   Marie-Agnès Travers, Leila Parizadeh, Céline Garcia, Philippe Haffner, Lionel Degremont, Frédérique Le Roux
ECOLOGICALLY REALISTIC MODEL OF INFECTION FOR EXPLORING THE HOST DAMAGE CAUSED BY Vibrio aestuarianus

10:40   BREAK

11:10   Morgan Smits, Adeline Bidault, Sebastien Artigaud, Serena Ferrareoso, Luca Bargelloni, Christine Paillard
GENOMIC FACTORS UNDERLYING RESISTANCE TO BROWN RING DISEASE IN THE MANILA CLAM Ruditapes philippinarum

11:30   Pierre Boudry, Sébastien Lachambre, Sabine Roussel, Sylvain Huchette, Kyme Chenevert, Christophe Lambert, Jérôme Bugeon, Anastasia Bestin, Romain Morvezen, Florian Enez, Pierrick Haffray
MIXED-FAMILY ESTIMATION OF GENETIC PARAMETERS OF GROWTH, MORPHOLOGIC, IMMUNE AND BEHAVIORAL TRAITS IN THE EUROPEAN ABALONE Haliotis tuberculata
11:50  Julien Vignier, Serean Adams, Zoe Hilton, Norman Ragg, Hannah Mae, Samantha Gale, Aditya Kesarcodi-Watson, Mark Camara, Nick King, Xavier Pochon, Kirsty Smith, Emmanuel Malpot, Tim Young, Andrea Alfaro, David Burritt, Jane Symonds
AN OVERVIEW OF PACIFIC OYSTER RESEARCH IN NEW ZEALAND

12:10  Florian Enez, Romain Morvezen, Jean-Baptiste Lamy, Lionel Dégremont, Daniel Guémené, Rachid Mahla, Lucie Genestout, Anastasia Bestin, Lucie Bouckellyoen, Fiz Da Costa, Emilie Vétois, Adeline Lange, Sylvie Lapègue, Pierrick Haffray
MASS SELECTION WITH FACTORIAL MATING DESIGNS AND DNA-PARENTAGE ASSIGNMENT IS USABLE TO IMPROVE SURVIVAL TO SUMMER MORTALITY IN PACIFIC OYSTER Crassostrea gigas

12:30  Marion Richard, Beatrice Bec, Charles Vanhuysse, Sebastien Mas, David Parin, Camila Chantalat, Patrik Le Gall, Annie Fiandrino, Franck Lagarde, Serge Mortreux, Vincent Ouisse, Anaïs Degut, Elise Hatey, Martine Fortune, Emmanuelle Roque d’orbcastel, Gregory Messiain, Dominique Munaron, Myriam Callier, Jocelyne Oheix, Valérie Derolez, Behzad Mostajir
MICROBIAL FOOD WEB STRUCTURE CHANGES IN INTERACTION WITH JUVENILE OYSTERS DURING MORTALITY EPISODE IN THE THAU LAGOON (FRANCE)

12:50  LUNCH

14:30  Ramón Filgueira, Cécile Vimond, Laura Steeves
DOES PUMPING RATE AFFECT PARTICLE RETENTION EFFICIENCY IN BIVALVES? THE CASE OF OYSTERS AND MUSSELS

14:50  Aspasia A. Sterioti, Maria A. Zaimaki, John A. Theodorou
FEEDING BEHAVIOR AND PSEUDO-FAECES PRODUCTION OF MEDITERRANEAN MUSSEL Mytilus galloprovincialis AT INDOOR CONDITIONS

15:10  Ana Nobre, Ricardo Pires, Filipe Soares, João G. Ferreira, François Hubert, Luisa M.P. Valente
A TOOL FOR SEED STOCK MANAGEMENT IN COMMERCIAL OYSTER NURSERIES

15:30  Rebeca Moreira, Alejandro Romero, Raquel Aranguren, Beatriz Novoa, Antonio Figueras
IS THE INVASIVE MUSSEL L. securis A RISK FOR THE PRODUCTION OF M. galloprovincialis?
15:50 Daniele Brigolin, Erika Maria Diletta Porporato, Fabio Pranovi, Roberto Pastres
MEDITERRANEAN MUSSEL GROWTH UNDER CLIMATE CHANGE: A MODELLING STUDY CARRIED OUT IN THE NORTHERN ADRIATIC SEA

16:10 Joao Ferreira, Joao P. Nunes, Joao Lencart e Silva, Alhambra Cubillo, Heather Moore, Adele Boyd, Matt Service, Changbo Zhu
VALUATION OF REGULATORY ECOSYSTEM SERVICES FROM SHELLFISH FARMING

16:30 Aad Smaal, Joao Ferreira, Jon Grant, Jens Petersen, Oivind Strand
MORE WITH MOLLUSCS

16:50 Tony van der Hiele, Jacob Capelle, Kathrin Poser, Lazaros Spaias, Luca van Duren
USING EARTH OBSERVATION DATA AS A TOOL FOR THE OPTIMIZATION OF GROWTH ON MUSSEL BOTTOM CULTURE FARMS

**IMMUNOLOGY AND PATHOLOGY - CONTINUED**
Monday, August 27 09:00 - 17:10 Rondelet
Chair: Nerea Roher

09:00 Jinliang Zhao, Ruiqi Zhang, Yueyue Hao, Xiaoying Cao, Shoujie Tang, Yan Zhao
RETINA DEVELOPMENT OF THE MANDARRIN FISH *Siniperca chuatsi* AT THE LARVAL AND JUVENILE STAGE

09:20 Parisa Norouzitallab, Kartik Baruah, Daisy Vanrompay, Peter Bossier
INNATE IMMUNITY OF THE BRINE SHRIMP *Artemia* SHOWS LONG-LASTING ANTI-BACTERIAL FEATURES: PHENOMENON VERIFIED DURING A TRANSGENERATIONAL STUDY

09:40 Magalí Rey, Rebeca Moreira, Beatriz Novoa, Antonio Figueras
REPROGRAMMING OF *M. galloprovincialis* HEMOCYTES TRANSCRIPTOME AFTER *V. splendidus* INFECTION

10:00 Caroline Montagnani, Maxime Lafont, Bruno Petton, Julien de Lorgeril, Manon Fallet, Agnès Vergnes, Jeremie Vidal-Dupiol, Yannick Gueguen, Cristian Chaparro, Eve Toulza, Christoph Grounau, Benjamin Gourbal, Guillaume Mitta, Celine Cosseau
HOW TO TRAIN YOUR OYSTER? A STORY OF IMMUNE SHAPING AND PRIMING IN THE PACIFIC OYSTER *Crassostrea gigas*
CRACKING THE CODE OF PACIFIC OYSTER MORTALITY SYNDROME

10:40  BREAK

11:10  Nerea Roher, Jie Ji, David Ramos-Vicente, Carlos Herrera, Enric Navas, José Miguel Lizcano, Jordi García-Fernández, Hector Escrivá, Àlex Bayés
CHARACTERIZATION OF THE TLR FAMILY IN Branchiostoma lanceolatum AND DISCOVERY OF A NOVEL TLR22 INVOLVED IN dsRNA RECOGNITION IN AMPHIOXUS

11:30  María Angéles Esteban, Barbara Rossi, José María García-Beltrán, Alberto Cuesta, Benedetta Tugnoli, Andrea Piva, Ester Grilli
IN VITRO STUDY OF A DOSE- AND TIME- EFFECT RESPONSE OF A COMBINATION OF ORGANIC ACIDS AND NATURE-IDENTICAL COMPOUNDS ON GILTHEAD SEABREAM HEAD-KIDNEY LEUCOCYTES

11:50  Shankar Chandra Mandal, Emma Carrick, Manfred Weidmann, Simon MacKenzie, Amaya Albalat
TRIGGERING OF PROTEIN PHOSPHORYLATION IN RAINBOW TROUT Oncorhynchus mykiss EPITHELIAL CELL LINE RTGILL-W1 BY VIRAL AND BACTERIAL PAMPS

12:10  Margarita Álvarez Rodríguez, Patricia Pereiro, Felipe E. Reyes-López, Lluis Tort, Antonio Figueras, Beatriz Novoa
ANALYSIS OF THE LONG-LIVED RESPONSE INDUCED BY IMMUNOSTIMULANTS AND EFFECT ON A VIRAL INFECTION IN ZEBRAFISH Danio rerio

12:30  Savitree Ritchuay, Simon Mackenzie
CHARACTERISATION OF PAMP-PRR INTERACTIONS IN NILE TILAPIA Oreochromis niloticus USING A MACROPHAGE PRIMARY CELL CULTURE

12:50  Marta Librán Pérez, María M. Costa, Antonio Figueras, Beatriz Novoa
ß-GLUCANS ADMINISTRATION INDUCES METABOLIC CHANGES AND DIFFERENTIAL SURVIVAL RATES AFTER A BACTERIAL OR VIRAL INFECTION IN TURBOT Scophthalmus maximus
13:10  LUNCH

14:30  Paolo Ronza, Diego Robledo, Ana Paula Losada, Roberto Bermúdez, Belén G. Pardo, María Isabel Quiroga, Paulino Martínez
TRANSCRIPTOME ANALYSIS OF TURBOT *Scophthalmus maximus* THYMUS IN RESPONSE TO INFECTION BY *Enteromyxum scophthalmi* (MYXOZOA)

14:50  Yuanxing Zhang, Dahai Yang, Qin Liu
UNLOCKING THE FISH NON-CANONICAL INFLAMMASOME ACTIVATION IN RESPONSE TO INFECTION

15:10  Felipe E. Reyes-Lopez, Johan Aerts, Eva Vallejos-Vidal, Bart Ampe, Kristof Dierckens, Lluis Tort, Peter Bossier
ASSOCIATION BETWEEN INNATE IMMUNITY AND CORTISOL RELEASE IN GNOTOBIOTIC FULL-SIBLING EUROPEAN SEA BASS *Dicentrarchus labrax* LARVAE CHALLENGED WITH *Vibrio anguillarum*

15:30  Maud Alix, Denis Saulnier, Eric Gasset, Margaux Crusot, Denis Coves, Agnes Bardon-Albaret, Alexandre Bantz, Cassandre Certain, Jehan-Hervé Lignot, Patricia Cucchi
THE TENACIBACULOSIS IN THE TROPICAL ORBICULAR BATFISH *Platax orbicularis* HIGHLIGHTS ON THE TRADE-OFF IN THE GUT BETWEEN IMMUNITY, OSMOREGULATION AND DIGESTION

METHIONINE AND TRYPTOPHAN DIETARY SUPPLEMENTATION INDUCE OPPOSITE EFFECTS ON THE EUROPEAN SEA BASS *Dicentrarchus labrax* IMMUNE RESPONSE AND DISEASE RESISTANCE

16:10  Isabelle Arzul, Delphine Serpin, Bruno Chollet, Juliette Gaillard, Christine Dubreuil, Mathilde Noyer, Lydie Canier, Céline Garcia
DIVERSITY OF THE PROTOZOOAN PARASITE *Marteilia refringens* IN MARINE BIVALVES IN EUROPE

16:30  Jean-Baptiste Lamy, Tristan Renault, Antoine Bietry, Nicole Faury, Steeve Webb, Jean-François Pepin, Benjamin Morga
UNSUSPECTED OSHV-1 GENOMIC DIVERSITY AT INTER- AND INTRA-HOST LEVEL

16:50  Wael Eltras, Bahadir Emre, Mahmoud Eltholth, Radi Mohammed, Ahmed Hamza, Abdullah Salah, Sonia Rey-Planellas, Simon Mackenzie, David Little, William Leschen
CURRENT AND PAST STATUS OF TILAPIA FARMERS IN KAFR EL SHEIK GOVERNORATE, EGYPT, WITH SPECIAL REFERENCE TO FARM PERFORMANCE AND FISH HEALTH ISSUES
11:10 Norhan Saleh, Elham Wassef, Shymaa Shalaby
THE ROLE OF DIETARY ASTAXANTHIN IN EUROPEAN SEA BASS
_Dicentrarchus labrax_ GROWTH, IMMUNITY, ANTIOXIDANT COMPETENCE AND STRESS TOLERANCE

11:30 Manuela Parini, Alessio Paoli
1-MONOGLYCERIDES OF SHORT- AND MEDIUM-CHAIN FATTY ACIDS: AN INNOVATIVE APPROACH TO CONTROL _Lactococcus garvieae_ IN RAINBOW TROUT, _Streptococcus agalactiae_ AND _Streptococcus iniae_ IN TILAPIA

11:50 Alessio Bonaldo, Luca Parma, Sara Ciulli, Enrico Volpe, Barbara Rossi, Andrea Piva, Matteo Soverini, Federica D’Amico, Marco Candela, Pier Paolo Gatta, Ester Grilli
EFFECTS OF INCREASING LEVEL OF DIETARY ORGANIC ACIDS AND NATURE-IDENTICAL COMPOUNDS ON GROWTH, INTESTINAL IMMUNE PARAMETERS AND GUT BACTERIAL COMMUNITIES OF EUROPEAN SEA BASS _Dicentrarchus labrax_ JUVENILES

12:10 Benedict Standen, Carina Schieder, Rui Goncalves
ARE ESSENTIAL OILS REALLY ESSENTIAL; THE FISH MEAL DILEMMA

12:30 Nejdet Gültepe
ASSESSMENT OF THE EFFECTS OF D-LIMONENE ON THE HEMATOLOGICAL AND BIOCHEMICAL BLOOD PARAMETERS OF RAINBOW TROUT _Oncorhynchus mykiss_

12:50 Alex Diana, Michael Wilhelm
BACTERIOSTATIC ACTIVITY OF PHYTOGENIC FLAVONOIDS AND BENEFICIAL EFFECTS ON GROWTH AND SURVIVAL OF RED NILE TILAPIA DURING SEX REVERSAL

13:10 LUNCH

14:30 Isabel Reis Batista, Joachim Henjes, Matthew Slater
THE USE OF MARENNINE IN AQUACULTURE – MUCH MORE THAN JUST GREENING
14:50  **Virak Visudtiphole**, Metavee Phromson, Siriporn Tala, Phimsucha Bunphimpapha, Kanchana Sittikankaew, Sopacha Arayamethakorn, Sita Preedanon, Waraporn Jangsutthivorawat, Sage Chaiyapechara, Panida Unagul
EFFECTS OF LONG-CHAIN POLYUNSATURATED FATTY ACID FORTIFICATION USING *Aurantiochytrium limacinum* BCC52274 ON GROWTH AND HEALTH OF POST LARVAL PACIFIC WHITE SHRIMP *Litopenaeus vannamei*

15:10  **Simon Roques**, C. Deborde, N. Richard, S. Skiba-Cassy, A. Moing, B. Fauconneau
1H-NMR METABOLOMIC INVESTIGATION OF THE EFFECT OF ALTERNATIVE DIETS ON RAINBOW TROUT PLASMA PROFILES

15:30  **Catherine Pujol-Baxley**
PROTEINplus: A BIOTECHNOLOGY PLATFORM TO MEET THE NEEDS OF AQUACULTURE

15:50  **Adejoke A. Adewumi**, Ebun O. Malomo, Adekunle I. Adebayo
UTILIZATION OF DIFFERENT PORTIONS OF CASSAVA ROOT AS ENERGY SOURCE IN THE DIET OF THE NILE TILAPIA *Oreochromis niloticus*

16:10  **Alberto J.P. Nunes**, Adhemar Rodrigues Oliveira-Neto, Karthik Masagounder
REDUCING CRUDE PROTEIN LEVELS IN THE DIETS OF JUVENILE *Litopenaeus vannamei* THROUGH SUPPLEMENTATION OF ESSENTIAL AMINO ACIDS

16:30  **Maarten Jay van Schoonhoven**
AQUACULTURE FEEDS AND THE RISK OF MYCOTOXINS

16:50  **Sjo Zwart**, Simeon Deguara
EFFECTS OF ALIPHOS® MONOCAL AND WINDMILL® AQUAPHOS ON PERFORMANCE AND PHOSPHORUS RETENTION IN EUROPEAN SEA BASS *Dicentrarchus labrax*
OFF THE SHELF SOLUTIONS FOR FINFISH AND SHELLFISH SELECTIVE BREEDING
Development of biological resources for the selective breeding of shellfish and finfish
Monday, August 27    14:30 - 17:10    Sully 3
Chair: Christopher Robert Bridges

Programme:
14:30   Chairman´s Introduction Company Forum / SLIDO Instructions – Questions and online polls
14:40   Keitaro Kato, Aquaculture Research Institute, Kindai University
        BREEDING AND INDUSTRIALIZATION IN MARINE FISH AQUACULTURE IN KINDAI UNIVERSITY, JAPAN
15:10   Antonio Coli, Selonda Aquaculture SA
        INDUSTRY REQUIREMENTS FOR SELECTIVE BREEDING SEA BREAM AND SEA BASS – THE MEDITERRANEAN PERSPECTIVE
15:30   Stylianos Kyriakidis, Christopher Hollenbeck and Ian A. Johnston (University of St Andrews, UK)
        PIPELINE FOR HIGH THROUGHPUT AMPLICON SEQUENCING OF HAPLOTYPES FOR PARENTAGE ASSIGNMENT IN AQUACULTURE BREEDING
15:50   BREAK
16:20   Ian Johnston (Xelect Ltd, St Andrews, Scotland)
        OFF THE SHELF SOLUTIONS FOR BROODSTOCK GENETICS – A VISION FOR THE FUTURE
16:40   Chris Bridges (HHU and TUNATECH)
        ORAL CONTRIBUTIONS and ROUND TABLE DISCUSSION – SLIDO QUESTIONS: ONLINE AND OFFLINE
17:00   CLOSING REMARKS
14:30  Türker Bodur
MORPHOLOGICAL DISCRIMINATION OF FARmed AND WILD GILTHEAD SEA BREAM Sparus aurata (L. 1753) POPULATIONS OF TURKISH MEDITERRANEAN COAST

14:50  Ian Bradbury, Emma Sylvester, Brendan Wringe, Steven Duffy, Ben Perriman, Shahinur Islam, Ian Fleming
DIRECT GENETIC INTERACTIONS BETWEEN WILD AND ESCAPED FARmed ATLANTIC SALMON FOLLOWING A SINGLE ESCAPE EVENT IN SOUTHERN NEWFOUNDLAND, CANADA

15:10  Ola Diserud, Kjetil Hindar, Peder Fiske, Sten Karlsson
FACTORS EXPLAINING ENTRY OF ESCAPED FARM SALMON IN NORWEGIAN RIVERS AND GENETIC INTROGRESSION INTO WILD ATLANTIC SALMON POPULATIONS

15:30  Jarle Tufto
DOMESTICATION AND FITNESS IN THE WILD: A MULTIVARIATE VIEW

15:50  Ingerid Julie Hagen Arnesen, Arne J. Jensen, Geir H. Bolstad, Ola H. Diserud, Kjetil Hindar, Sten O. Karlsson
STOCKING ACCENTUATES GENETIC INTROGRESSION OF FARmed ESCAPED SALMON IN A WILD SALMON POPULATION

16:10  Sten Karlsson, Geir Bolstad, Ola Diserud, Ingerid Julie Hagen Arnesen, Kjetil Hindar, Grethe Robertsen, Line Sundt-Hansen
A SYNTHESIS OF ESCAPED FARmed SALMON IN NORWAY – GENETIC INTROGRESSION AND CONSEQUENCES FOR WILD SALMON POPULATIONS
14:30  Alejandro P. Gutierrez, Tim P. Bean, Oswald Matika, Ross D. Houston
GENOMIC PREDICTION ACCURACY FOR GROWTH TRAITS IN PACIFIC OYSTER USING A MEDIUM DENSITY SNP ARRAY

14:50  José Manuel Yáñez, Giovanna Caceres, Alejandro Maass, Diego Díaz, Ricardo Palma, Dante Travisany, Cindy Lawley, Jean Lhorente
HIGH-THROUGHPUT SINGLE NUCLEOTIDE POLYMORPHISM DISCOVERY IN NILE TILAPIA USING WHOLE GENOME SEQUENCING OF HUNDREDS OF ANIMALS

15:10  François Allal, Romain Morvezen, Sophie Brard-Fudulea, Charles Poncet, Elodie Belmonte, Ronan Griot, Jean-Sébastien Bruant, Sophie Cariou, Aline Bajek, Bruno Peyrou, Marc Vandeputte, Céline Jaimet, Pierrick Haffray, Pierre-Alexandre Gagnaire
DEVELOPMENT AND CHARACTERIZATION OF A 57K SINGLE NUCLEOTIDE POLYMORPHISM ARRAY FOR EUROPEAN SEA BASS

15:30  Jonathan D’Ambrosio, Florence Phocas, Pierrick Haffray, Edwige Quillet, Anastasia Bestin, Clémence Fraslin, Nicolas Dechamp, Mathilde Dupont-Nivet
GENOMIC ESTIMATES OF DIVERSITY BETWEEN AND WITHIN FRENCH RAINBOW TROUT POPULATIONS

15:50  Clémence Fraslin, Sophie Brard-Fudulea, Jonathan D’Ambrosio, Anastasia Bestin, Mathieu Charles, Pierrick Haffray, Florence Phocas, Edwige Quillet
RAINBOW TROUT RESISTANCE TO Flavobacterium psychrophilum: A GENOME WIDE ASSOCIATION STUDY IN A FRENCH POPULATION AFTER A NATURAL DISEASE OUTBREAK

16:10  François Allal, Khanh Q. Doan, Béatrice Chatain, Alain Vergnet, Pierrick Haffray, Marc Vandeputte
GENOME-WIDE ASSOCIATION STUDY AND GENOMIC EVALUATIONS FOR RESISTANCE TO VIRAL NERVOUS NECROSIS IN WILD POPULATIONS OF EUROPEAN SEA BASS Dicentrarchus labrax
14:30 David Domínguez, Zakarya Sehnine, Paula Sarmiento, Ramon Fontanillas, Philip Antony Jesu Prabhu, Marisol Izquierdo
DEFINING MINERAL OPTIMUM LEVELS ON GILTHEAD SEABREAM *Sparus aurata* FINGERLINGS: SELENIUM, MANGANESE AND COPPER

14:50 Nathaniel Farris, Jin-hyeock Lee, Haham Kim, Hyeonho Yun, Yongjik Lee, Sungwook Han, Sungchul Bai
THE EFFECTS OF THREE *Bacillus*-FERMENTED VEGETABLE PROTEINS AS FISHMEAL REPLACERS IN JUVENILE WHITELEG SHRIMP *Litopaeneus vannamei*

15:10 Seonghun Won, Sungchul Bai, Youngjin Park
POTENTIAL USE OF DIETARY TWO SINGLE PROBIOTICS AND THEIR MIXTURE AS THE ANTIBIOTIC REPLACERS IN RAINBOW TROUT *Oncorhynchus mykiss* AND STARRY FLOUNDER *Platichthys stellatus*

15:30 Sungchul Bai, Haham Kim, Seunghan Lee
POTENTIAL USE OF THE SYNBIOTICS AS THE ANTIBIOTIC REPLACERS FOR JAPANESE EEL *Anguilla japonica* AQUACULTURE IN KOREA

15:50 Naser Agh, Fatemeh Jafari, Farzaneh Noori, Amir Tokmachi, Enric Gisbert
HOW DIETARY PHOSPHOLIPIDS EFFECT THE GROWTH PERFORMANCE, BLOOD CHEMISTRY AND IMMUNITY IN JUVENILE STELLATE STURGEON *Acipenser stellatus*

16:10 Sungchul Bai, Wonsuk Choi, Seonghun Won, Kang-Woong Kim, Bong-Joo Lee, Hyon-Sob Han
THE OPTIMUM LEVELS FOR THE MIXTURE OF ANIMAL AND PLANT PROTEIN AS THE FISH MEAL REPLACERS IN OLIVE FLOUNDER *Paralichthys olivaceus*

16:30 Matteo Calligaris, Alessio Paoli, Manuela Parini
1-MONOGLYCERIDES OF SHORT- AND MEDIUM-CHAIN FATTY ACIDS PROVED TO IMPROVE SURVIVAL RATE OF YELLOW TUNA *Thunnus albacares* AT EARLY DEVELOPMENTAL STAGES

16:50 Manuela Parini, Alessio Paoli, Matteo Calligaris
1-MONOGLYCERIDES OF SHORT- AND MEDIUM-CHAIN FATTY ACIDS: AN ANTIBIOTIC FREE APPROACH TO CONTROL *Vibrio parahaemolyticus* IN *Penaeus vannamei* AND *Vibrio anguillarum*, *Tenacibaculum maritimum*, *Yersinia rucker*, *Aeromonas hydrophila* AND OTHER GRAM-NEGATIVE BACTERIA AFFECTING SALMONIDS, EEL, MARINE AND FRESHWATER FISH
THE FUTURE OF AQUACULTURE VALUE CHAINS
Monday, August 27  15:10 - 17:10  Sully 2
Chairs: Olivier Joffre, Ben Belton

15:10  **Simon Bush**, Ben Belton, David Little, Md. Saidul Islam
EMERGING TRENDS IN AQUACULTURE VALUE CHAIN RESEARCH

15:30  **David Little**, Francis Murray, Richard Newton, Dimitar Taskov, Alex Pounds,
Simao Zacarias, John Bostock, Stuart Bunting, Mahmoud Eltolth,
William Leschen
SUSTAINABLE INTENSIFICATION OF AQUACULTURE-LESSONS FROM VALUE CHAIN ACTORS

15:50  **Hilde Toonen**, Tori Spence McCall, Simon Bush
THE AQUACULTURE GOVERNANCE INDEX: AN INTRODUCTION

16:10  **Johan Verreth**, Sophie Neitzel, Simon Bush
FEEDING EUROPE FARMED FISH: TRENDS IN PRODUCTION, CONSUMPTION AND TRADE

16:30  **Ben Belton**
THE QUIET REVOLUTION IN AQUACULTURE VALUE CHAINS

16:50  **Olivier Joffre**, Laurens Klerkx
VALUE CHAIN INNOVATION RESEARCH IN AQUACULTURE
15:10  **Thierry Chopin**, Adrian Hamer  
BEYOND LINEAR PROTEIN SOURCING: BRINGING ENVIRONMENTAL SUSTAINABILITY, ECONOMIC STABILITY THROUGH CROP DIVERSIFICATION AND SOCIETAL ACCEPTABILITY WITH INTEGRATED MULTI-TROPHIC AQUACULTURE (IMTA) IN A CIRCULAR ECONOMY FRAMEWORK

15:30  **Stephen Cross**, Allison Byrne  
A GROWING INTEREST IN SEAWEEDS – INDUSTRY AND COASTAL COMMUNITY ENGAGEMENT TO SUPPORT COMMERCIALIZATION OPPORTUNITIES IN COASTAL BRITISH COLUMBIA, CANADA

15:50  **Tamás Bardóczi**, Rachel Cox, Karl Cutajar, Alexia Massa-Gallucci  
TAPAS CASE STUDY: NUTRIENT RETENTION OF FISH FARM EFFLUENT AND SITE ASSESSMENT FOR THE FEASIBILITY OF INTEGRATED MULTI-TROPHIC AQUACULTURE (IMTA) IN MALTA

16:10  **Wouter Visch**, Per Bergström, Goran Nylund, Henrik Pavia, Mats Lindegarth  
SPATIAL GROWTH PATTERNS AND NUTRIENT MITIGATION CAPACITY OF THE BLUE MUSSEL *Mytilus edulis* AND KELP *Saccharina latissima* ON THE SWEDISH WEST COAST

16:30  **Henrice Jansen**, Jinghui Fang, Marit Nederlof, Natalie Brennan, Pia Kupka Hansen, Ole Samuelsen, Oivind Strand  
DEVELOPMENT OF BENTHIC IMTA SYSTEMS BY COUPLING POLYCHAETE PRODUCTION TO SALMON FARMING: SYSTEM DEVELOPMENT, NUTRIENT DYNAMICS AND RISK OF MEDICINE RESIDUES

16:50  **Candace Loy**, Jim Dollimore, Craig Radford, Andrew Jeffs  
GROWOUT AND FUCOIDAN YIELD OF NEW ZEALAND NATIVE FUCOID BROWN SEAWEED *Hormosira banksii* USING PACIFIC OYSTER FARM INFRASTRUCTURE
INvertebrateIT MATCHMAKING AND BROKERAGE (TAPAS)

Tuesday, August 28 08:00 - 13:00 Joffre 4
Chair: Jamie Downes

INvertebrateIT aims to help aquaculture operators mitigate their current dependence on costly, volatile, and often unsustainable fish feeds; to diversify their business; to contribute to better management of valuable organic waste and new algal substrates for invertebrate production.

The INvertebrateIT Brokerage Event will promote three selected projects; will allow for engagement of stakeholders and will facilitate the creation and mobilisation of PPPs, enhancing visibility and networking.

NUTRITION: NOVEL FEED INGREDIENTS

Tuesday, August 28 09:00 - 12:30 Einstein Auditorium
Chair: Otavio Castro

09:00 Maria N. Metsoviti, Elli Z. Gkalogianni, Aikaterini M. Katouni, Georgios Rougkas, Eleni Savvaki, Pierre Psafakis, Nikolaos Katsoulas, Georgios Papapolymerou, Ioannis T. Karapanagiotidis
EFFECTS OF REPLACING FISHMEAL BY Chlorella vulgaris AND FISH OIL BY Nannochloropsis gaditana AND Schizochytrium sp. BLEND ON GROWTH AND FEED EFFICIENCY OF GILTHEAD SEABREAM Sparus aurata

09:20 Nadège Richard, Otavio Castro, Tanuttha Suyawanish, Marcelo Borba, Alberto Nunes, Jorge Dias, Chutima Tantikitti, Eric Auclair
NOVEL YEAST PROTEIN SOLUTIONS (PROSAF®) IN REDUCED FISH MEAL DIETS FOR WHITELEG SHRIMP L. vannamei

09:40 Tibiabin Benitez-Santana, Thomas Larsson, Aleksei Krasnov, Carlo Lazado, Bjarne Hatlen, Turid Mørkøre
HEALTH AND FLESH QUALITY OF ATLANTIC SALMON Salmo salar FED A MODERN LOW FISHMEAL DIET SUPPLEMENTED WITH ANTARCTIC KRILL Euphausia superba
10:00  Sandrine Skiba-Cassy, Christine Burel, Frédéric Terrier, Benoit Fauconneau, Iban Seiliez, Benjamin Costas, Nadège Richard
NEW SUSTAINABLE PROTEIN SOURCES IN RAINBOW TROUT PLANT-BASED DIETS: CONSEQUENCES ON GROWTH PERFORMANCES, FATTY ACID CONTENT AND IMMUNE-STATUS

10:20  BREAK

11:10  Monika Weiss, Matthew J. Slater
BLUE LUPIN FOR WHITE SHRIMP *Litopenaeus vannamei*

11:30  Ayodeji Adeoye, Simon Davies
INSECT PROTEIN MEAL AS ALTERNATE PROTEIN SOURCE IN THE DIETS OF AFRICAN CATFISH *Clarias gariepinus*

**FISHBOOST: BOOSTING EUROPEAN AQUACULTURE BY ADVANCING SELECTIVE BREEDING TO THE NEXT LEVELS**

Tuesday, August 28  09:00 - 12:30  Sully 1
Chair: Anna Sonneson

09:00  Beatriz Villanueva, María Saura, Armando Caballero, Enrique Santiago, Elisabeth Morales, Almudena Fernández, Jesús Fernández, Santiago Cabaleiro, Paulino Martínez, Adrián Millán, Christos Palaiokostas, Martín Kocour, Ross Houston, Martin Prchal, Luca Bargelloni, Tzokas Kostas
THE IMPORTANCE OF ENSURING GENETIC VARIABILITY WHEN ESTABLISHING SELECTION PROGRAMMES IN AQUACULTURE

09:20  Anna K. Sonesson, R. Palaiokostas, R.D. Houston, B. Dagnachew, M.L. Aslam, T.H.E. Meuwissen
GENOMIC SELECTION ANALYSES RESULTS ON COMMON CARP, EUROPEAN SEABASS, GILTHEAD BEABREAM AND TURBOT

09:40  Ross D. Houston, Christos Palaiokostas, Diego Robledo, Tomas Vesely, Martin Prchal, Dagmar Pokorova, Veronika Piackova, Lubomir Pojezdal, Martín Kocour
MAPPING, SEQUENCING AND FUNCTIONAL ANNOTATION OF A QTL REGION AFFECTING RESISTANCE TO KOI HERPESVIRUS IN COMMON CARP

10:00  Paulino Martínez, Francesco Maroso, María Saura, Almudena Fernández, Andrés Blanco, Miguel Hermida, Santiago Cabaleiro, Andrea Doeschl-Wilson, Osvaldo Anacleto, Ross Houston, Adrián Millán, Jesús Fernández, Luca Bargelloni, Giulia dalla Rovere, Miguel A. Toro, María Jesús Carabaño, Carmen Bouza, Beatriz Villanueva
A CLOSER LOOK AT TURBOT GENOME REVEALS A GENETIC COMPONENT OF PARASITE RESISTANCE: NEW TOOLS FOR SELECTION
10:20  Binyam Sime Dagnachew, Anna Sonesson, Theo Meuwissen
USE OF DNA POOLING IN GENOMIC SELECTION FOR A DISEASE TRAIT IN ATLANTIC SALMON

10:40  BREAK

11:10  Marc Vandeputte, Jérôme Bugeon, Anastasia Bestin, Alexandre Desgranges, Sébastien Courant, Jean-Michel Allamellou, Anne Sophie Tyran, François Allal, Mathilde Dupont-Nivet, Pierrick Haffray
SUCCESSFUL REALIZED SELECTION RESPONSE FOR FILLET YIELD IN RAINBOW TROUT *Oncorhynchus mykiss*

11:30  Martin Prchal, Jérôme Bugeon, Marc Vandeputte, Antti Kause, Alain Vergnet, Jinfeng Zhao, David Gela, Lucie Genestout, Anastasia Bestin, Pierrick Haffray, Martin Kocour
POTENTIAL FOR GENETIC IMPROVEMENT OF THE MAIN SLAUGHTER YIELDS IN COMMON CARP WITH *IN VIVO* MORPHOLOGICAL PREDICTORS

11:50  Beatriz Villanueva, Silvia García-Ballesteros, Jesús Fernández
OPTIMAL SCHEMES FOR ADVANCING SELECTIVE BREEDING TO THE NEXT LEVEL FOR THE MAIN SPECIES OF EUROPEAN AQUACULTURE

12:10  Kasper Janssen, Helmut Saatkamp, Hans Komen
COST-BENEFIT ANALYSIS OF A BREEDING PROGRAM FOR ATLANTIC SALMON

EUROPEAN ASSOCIATION OF FISH PATHOLOGISTS (EAFP) MEETING
Tuesday, August 28  09:00 - 12:30  Sully 3
Chair: Jean-Christophe Avarre

Meeting of the French branch of the European Association of Fish Pathologists (EAFP)

09:00  Jean-François Bernardet, Branch Officer for France
INTRODUCTION

09:15  S. Hammoumi, A. Santika, Z. Zainun, T. Vallaey, E. Borzym, S. Bergmann, C. Klopp, M. Engelsma, J.C. Avarre (IRD Montpellier)
MISE EN ÉVIDENCE DE GENOMES ATYPIQUES DE «KOI HERPES VIRUS» SUITE AU SEQUENÇAGE COMPLET D’UN GRAND NOMBRE DE SPECIMENS

09:40  L. Louboutin (ANSES Plouzané)
BILAN DE LA SITUATION SANITAIRE EN FRANCE ET REVUE DES DIFFERENTS EPISODES INFECTIEUX DANS LESQUELS LE LNR A ÉTÉ IMPLIQUE.
10:05  E. Leguay (Société Vétofish)
ETAT ACTUEL DES CAS D’INFECTIONS AU «CARP EDEMA VIRUS»

10:30  BREAK

10:50  A. Le Breton (Société Vet’Eau)
IMPACT DES BACTERIES DU GENRE Tenacibaculum SUR LES ELEVAGES DE POISSONS MARINS

APPLICATION DU MALDI-TOF ET DES OUTILS BIOINFORMATIQUES A L’IDENTIFICATION RAPIDE, PRECISE ET BON MARCHE DES SOUCHES DE Tenacibaculum DANS LES ELEVAGES MARINS

11:40  E. Larvor, M. Quentel, H. Duprey, E. Jouy, C. Chauvin, I. Kempf, A. Whilhem, B. Gassilloud, S. Baron (ANSES Ploufragan)
SENSIBILITE AUX ANTIBIOTIQUES D’UNE COLLECTION DE SOUCHES d’Aeromonas ISOLEES DES BRANCHIES, DU MUCUS ET DU CONTENU INTESTINAL DE TRUITES D’ELEVAGE

12:05  J.C. Raymond (Comité National des Pêches Maritimes et des Elevages Marins)
GRANULOMES ET DEPOTS DANS LES REINS, RATES ET FOIES DES POISSONS MARINS : UN PROBLEME?

12:30  GENERAL DISCUSSION AND CONCLUSIONS

BIOSECURITY AND ANTIMICROBIAL RESISTANCE (FAO)

Tuesday, August 28  09:00 - 12:30  Barthez
Chairs: Patrick Sorgeloos, Melba Bondad-Reantaso

09:00  Melba Bondad-Reantaso
WELCOME REMARKS (FAO)

09:05  Grant Stentiford, Melba Bondad-Reantaso, Sharon McGladdery
THE ANATOMY OF THE EMERGING DISEASE

09:35  Patrick Sorgeloos
NEED FOR MORE RESEARCH IN MICROBIAL MANAGEMENT TO MAKE INTENSIVE AQUACULTURE MORE SUSTAINABLE
09:55  John Benzie, Mohan V. Chadag, Paola Reale  
FISH CRP AND TILAPIA HEALTH RESEARCH IN RELATION TO GLOBAL BIOSECURITY GOVERNANCE  

10:15  Brit Hjeltnes, Saraya Tavornpanich, Edgar Brun  
BIOSECURITY AND TRANSPARENCY  

10:35  Niall Gerlitz  
OFFICIAL CONTROL OF AQUACULTURE IN THE EU  

10:55  Frank Asche  
ECONOMIC DRIVERS OF BIOSECURITY  

11:15  Melba Reantaso, Ramesh Perera, Silvia Kreindel, Paolo Calistri, Julio Pinto, Eran Raizman  
TILAPIA LAKE VIRUS (TiLV) EXPERT KNOWLEDGE ELICITATION RISK ASSESSMENT  

11:35  Snježana Zrncic  
ROLE OF AQUACULTURE IN THE EU ACTION PLAN ON AMR  

11:55  Charles Mcgurk, Alex Obach  
FUNCTIONAL NUTRITION IS A CORE COMPONENT OF AQUACULTURE HEALTH MANAGEMENT THAT COULD MITIGATE ANTIMICROBIAL RESISTANCE (AMR) DEVELOPMENT  

A REFOCUSSING OF APPLIED RESEARCH PRIORITIES AND AGENDA TO SUPPORT THE GROWING COMMERCIAL AQUACULTURE SECTOR AND ASSOCIATED VALUE CHAIN ACROSS ALL SCALES ON THE AFRICAN CONTINENT  

Tuesday, August 28  09:00 - 13:00  Tiberade  
Chair: William Leschen  

09:00  David Little, University of Stirling (UOS) / Charles Ngugi, Kenya  
INTRODUCTION  

09:10  William Leschen, Institute of Aquaculture Stirling  
SETTING THE SCENE: HISTORICAL UP TO CURRENT PERSPECTIVE OF COMMERCIALISATION OF AQUACULTURE ACROSS AFRICA – INFLUENCE / SUCCESS? OF RESEARCH SECTOR IN CONSTRUCTIVELY BENEFITTING?
Katrina Ole Moi Yoi, Stanford Univ. US and Victory Farms Kenya
CASE STUDY: CONCEPT, DESIGN AND DEVELOPMENT OF VICTORY FARMS, KENYA’S LARGEST COMMERCIAL AQUACULTURE PRODUCER.

Marc Oswald, APDRA ISTOM
CASE STUDY: APDRA AN EXAMPLE OF NGO SUPPORTING AND BENEFITTING SMALLER SCALE LOWER INCOME ENTREPRENEURIAL INDIVIDUALS TOWARDS FINANCIALLY VIABLE SUSTAINABLE AQUACULTURE. THE MISSING MIDDLE?

10:40 BREAK

11:00 Focus groups: Targeting future needs and priorities for research sector to benefit commercialisation and increase in sustainable farmed fish production, sales and consumption

11:40 Groups present back to session

12:00 Expert panel led discussion
Questions and Answers: Setting the applied research agenda for the future

12:50 A proposed summary agenda for the future

HATCHERY TECHNOLOGIES, BROODSTOCK MANAGEMENT AND LARVAE & JUVENILE MANAGEMENT
Tuesday, August 28 09:00 - 17:10 Louisville
Chairs: Maria Celia Portella, Isabel Represas

09:00 Jean-Jacques Lareyre, Anne-Sophie Goupil, Ahmed Maouche, Alexandra Depincé, Lionel Goardon, Marjorie Bideau, Nicolas Dechamp, Edwige Quillet, Francine Krieg, Florence Le Gac
GERM STEM CELLS TRANSPLANTATION IN FISH: AN INNOVATIVE BIOTECHNOLOGY FOR THE FAITHFUL REGENERATION OF CRYOPRESERVED GENETIC RESOURCES COLLECTED FROM SELECTED LINES OF AGRONOMIC INTEREST

09:20 Gennady G. Matishev, Elena N. Ponomareva
AQUACULTURE PROMISING OBJECTS AND NEW TECHNICAL MEANS
09:40  Valérie Robitaille, Samuel Couture Brochu, Marnix Faes, Louis-David Coulombe, Julien Roy  
ARTIFICIAL INTELLIGENCE TO GAIN VALUABLE INSIGHT ON AQUATIC ORGANISMS

10:00  Béla Urbányi, Gergely Bernáth, Levente Várkonyi, Ákos Horváth, Zoltán Bokor  
LATEST RESULTS OF WELS CATFISH *Silurus glanis* SPERM CRYOPRESERVATION AND POSSIBILITIES OF PRACTICAL APPLICATION

10:20  Taslim Mahmood  
DOMESTICATED SPF SHRIMP AQUACULTURE ACTIVITIES IN BANGLADESH

10:40  BREAK

11:10  María Fernández Míguez, Øyvind J. Hansen, Pablo Presa, Montse Pérez, Helge Tveiten, Atle Mortensen, Velmurugu Puvanendran  
INFLUENCE OF MATERNAL FACTORS ON EGG QUALITY IN ATLANTIC COD *Gadus morhua*

11:30  Samuel Pountney, Ingrid Lein, Herve Migaud, Andrew Davie  
TEMPERATURE EFFECTS ON CAPTIVE LUMPFISH *Cyclopterus lumpus* BROODSTOCK SPAWNING SEASON AND GAMETE QUALITY

11:50  José Beirão, Einar Skarstad Egeland, Arianne Savoie, Jose de Pool, Denis Chabot, Nathalie R. Le François, Sylvie Bolla  
WHAT IS EGG QUALITY IN SPOTTED WOLFFISH *Anarhichas minor*? A KEY TO REPRODUCTIVE PERFORMANCE EVALUATION

12:10  Juan Fernando Paredes Salas, Gonzalo De Alba, José Fernando López-Olmeda, José Antonio Muños-Cueto, Evaristo Mañanós, Francisco Javier Sánchez-Vázquez  
DAILY RHYTHMS OF *IN VITRO* FERTILIZATION IN FISH

12:30  LUNCH

14:00  Sherezade Carrillo, José Fernando López-Olmeda, Francisco Javier Sánchez-Vázquez  
COMBINED EFFECTS OF DAILY THERMOCYCLES AND LIGHT SPECTRUM DURING EARLY DEVELOPMENT OF FISH

14:20  Ivone Giffard-Mena, Alvaro Hernández-Montiel, Javier Pérez-Robles, Conal David-True  
SALINITY ADAPTATION OF *Totoaba macdonaldi* LARVAL STAGES
14:40  **Elin Kjørsvik**, Julie Terese Hanssen, Joachim Larsen Marthinsen, Job van Mil
**FUNCTIONAL DEVELOPMENT OF LUMPFISH Cyclopterus lumpus LARVAE IN RELATION TO GROWTH AND DIET**

15:00  **Luis Conceição**, Sofia Engrola, Wilson Pinto, Manuel Yúfera
**HIGH PERFORMANCE MICRODIETS FOR FISH LARVAE: PROGRESS AND DIFFICULTIES**

15:40  **Michael Clarkson**, Herve Migaud, Jose C. Mota Velasco, Alastair Hamilton, John F. Taylor
**THE IMPACT OF POST-OVULATORY AGEING ON THE DEVELOPMENT OF DIPLOID AND TRIPLOID ATLANTIC SALMON *Salmo salar***

16:00  **Cédric Audor**
**AQUACULTURE LIVESTOCK INSURANCE**

16:20  **Geert Rombaut**, Alessandro Moretti, Steven Debono, Eddy Naessens
**THE CONTINUOUS DEVELOPMENT OF INNOVATIVE PRODUCTS AND CONCEPTS THAT FACILITATES THE USE OF *Artemia* IN MARINE FISH AND SHRIMP HATCHERIES**

16:40  **Tania De Wolf**, Alessandro Moretti, Steven De Bono, Geert Rombaut
**RECENT ADVANCES IN THE LARVAL REARING AND FEEDING STRATEGIES FOR MARINE MEDITERRANEAN SPP. AND ITS IMPACT ON OVERALL FRY QUALITY**

17:00  **Luis Andre Sampaio**, Jose Linares, Diego Miranda, Marcelo Hideo Okamoto, Ricardo Vieira Rodrigues
**THE EFFECT OF STOCKING DENSITY ON PRODUCTION OF JUVENILE BRAZILIAN FLOUNDER *Paralichthys orbignyanus***

**FRENCH SHELLFISH INDUSTRY FORUM**
Tuesday, August 28  09:00 - 17:20  Rondelet
Chairs: Philippe Le Gal, Patrice Lafont
Moderators: Emmanuelle Roque, Béatrice Pary

09:00  Opening speech by **Philippe Le Gal**, President of the French National Shellfish Council – CNC, FR

**Session 1 : Situation and future of the French oyster aquaculture industry**

09:10  **Thierry Hélie**, President of Sector I “Oyster”, French National Shellfish Council, FR
**THE FRENCH OYSTER AQUACULTURE INDUSTRY, ITS REGIONS AND ITS PRODUCTION**
09:20  Isabelle Arzul, Coordinator VIVALDI, Ifremer, FR  
CAN WE PREVENT AND CONTROL SHELLFISH DISEASES?

09:30  Pierrick Haffray, Aquaculture operator of SYSAAF, FR  
SHELLFISH GENETIC IMPROVEMENT IN FRANCE

09:40  Cécile Mablouké, CEPRALMAR, FR  
TEMPORAL EVOLUTION OF THE DIFFERENT TECHNIQUES AND SUPPORTS  
USED IN SHELLFISH FARMING AND PERSPECTIVES

09:50  Benoit Salaun, North Brittany Shellfish Council, FR  
PERLE II: FLAT OYSTER SELECTION TO BOOST THE PRODUCTION

10:00  Round table

10:40  BREAK

Session 2: Shellfish quality and consumer information in France

11:10  Jean Côme Piquet, National coordinator REMI, Ifremer, FR  
THE HEALTH SURVEILLANCE STRATEGY IN FRANCE FOR SHELLFISH AND  
ENVIRONMENT

11:25  Caroline Medous, Director of Direction Départementale de la Protection des  
Populations de l’Hérault, FR  
SHELLFISH QUALITY AND CRISIS MANAGEMENT

11:40  Guillaume Nouvel, FranceAgrimer, FR  
THE SHELLFISH CONSUMER TRENDS OF THE FRENCH HOUSEHOLDS

11:55  Matthew Hébert, CEPRALMAR, FR  
COMMERCIAL PRODUCTION SECUREMENT

12:10  Round table

12:40  Lunch

Session 3: Shellfish ecosystem and environment

14:00  Fabrice Pernet, Coordinator GIGASSAT, Ifremer/UMR LEMAR, FR  
SHELLFISH AQUACULTURE AND GLOBAL CHANGE: HOW WILL BE OURS  
OYSTERS IN THE FUTURE?

14:15  Joel Aubin, INRA, FR  
BLUE MUSSEL Mytilus edulis BOUCHOT CULTURE IN MONT-ST MICHEL  
BAY: POTENTIAL MITIGATION EFFECTS ON CLIMATE CHANGE AND  
EUTROPHICATION
14:30 Marion Richard, Ifremer/UMR MARBEC, FR and Romain Pete, University of Montpellier/UMR MARBEC, FR
CARRYING CAPACITY OF THE THAU LAGOON IN A RESTORATION CONTEXT

14:50 Round table

Session 4: Management of French shellfish growing areas

15:30 THAU, A PILOT REGION IN THE TERRITORY MANAGEMENT FOR THE MOLLUSCS ISSUES by Syndicat Mixte du Bassin de Thau, FR

15:40 VIGITHAU, A DECISION SUPPORT TOOL FOR THE CONTROL OF HEALTH RISKS by Syndicat Mixte du Bassin de Thau, FR

15:50 INTEGRATED AND CONCERTED MANAGEMENT OF THE THAU SHELLFISH AQUACULTURE AREA IN RESPONSE TO THE SUSTAINABLE development by Hélène Rey Valette, LAMETA, University of Montpellier, FR

16:00 Nadine Segalen, South Brittany Shellfish Council, FR
FRENCH SHELLFISH AQUACULTURE, AN INTERFACE BETWEEN LAND AND SEA AND UNDER PRESSURE

16:10 MANAGEMENT OF A FRENCH SHELLFISH GROWING AREA (presentation and speaker TBC)

16:20 Round table

17:00 Closing speech by Patrice Lafont, President of the Mediterranean Shellfish Council, FR

EMERGING DISEASES AND DIAGNOSTICS
Tuesday, August 28 09:00 - 17:20 Antigone 1
Chair: Benjamin Beck

09:00 Cara Brosnahan, S.E. Keeling, E. Georgiades, J.S. Munday, P. Davie, C.M. McDonald, B.J. Jones
USING MOLECULAR TOOLS TO DIFFERENTIATE BETWEEN LIVE AND DEAD AQUATIC PATHOGENS

09:20 Chen Su, Ying-Jyun Chen, Yu-Chun Lin, Yun-Long Tsai, Simon Chung
A FULLY AUTOMATED SAMPLE-TO-RESULT RT-PCR SYSTEM FOR QUICK AND SIMPLE DETECTION OF TILAPIA LAKE VIRUS
09:40  Brian Quinn, Josip Barisic, Teresa Garzon, Meritxell Padrisa, Stuart Cannon  
THE DEVELOPMENT OF HIGH THROUGHPUT DIAGNOSTIC TECHNIQUES  
TO ASSESS FISH HEALTH AND THE IMPACT OF SEA LICE TREATMENT IN  
AQUACULTURE

10:00  Mònica Campàs, Anna Toldrà, Karl B. Andree, Ana Roque, Noèlia Carrasco,  
Ignasi Gairín, Dolors Furones  
CAPTURE OF INFECTIOUS OSTREID HERPESVIRUS FROM Crassostrea gigas  
USING ANIONIC POLYMER-COATED MAGNETIC BEADS

10:20  Andrew Desbois, Stuart McMillan, Mahfuza Akter  
DISCOVERY OF GENES PROMOTING GROWTH OF Aeromonas salmonicida IN  
ATLANTIC SALMON MUCUS

10:40  BREAK

11:10  Alain Le Breton, Arnaud Marie, Pierre Yves Moalic, Frédéric Bourgeois,  
Robin Carpentier  
Tenacibaculum INFECTIONS IN MARINE FINFISH AQUACULTURE: RECENT  
EVOLUTION IN CLINICAL ASPECTS AND STRAIN IDENTIFICATION – IMPACT  
ON PROPHYLACTIC METHODS

11:30  Benjamin Beck, Haitham Mohammed, Craig Shoemaker, Mediha Aksoy,  
Eric Peatman  
MECHANISMS OF PATHOGEN VIRULENCE AND HOST SUSCEPTIBILITY  
IN VIRULENT Aeromonas hydrophila INFECTIONS OF CHANNEL CATFISH  
Ictalurus punctatus

11:50  Nora Navarro-Gonzalez, Sandrine Baron, Emeline Larvor, Anthony Le Piouffe,  
Catherine Fournel, Thierry Morin, Benoît Thuillier, Ségolène Calvez  
A POTENTIAL CONTRIBUTION OF AQUACULTURE TO THE EMERGENCE OF  
mcr-1 MEDIATED COLISTIN RESISTANCE? NEW EVIDENCE COMING FROM  
FRANCE

12:10  Brit Hjeltnes, Britt Bang Jensen, Geir Bornø, Asle Haukaas, Cecilie S. Walde  
UPDATE ON FISH DISEASE SITUATION IN NORWAY 2017

12:30  LUNCH
14:00 Seongdo Lee, Chaehyeon Lim, Thiunuwan Priyathilaka Thanthrige, Myoung-Jin Kim, Hyerim Yang, Hyukjae Kwon, Jeongeun Kim, Seong Don Hwang, Jehee Lee
FIRST ISOLATION, GENOMIC CHARACTERIZATION, AND PATHOGENESIS OF SPRING VIREMIA OF CARP VIRUS ISOLATED FROM COMMON CARP *Cyprinus carpio carpio* AND LARGEMOUTH BASS *Micropterus salmoides* IN SOUTH KOREA

14:20 Jean-Christophe Avarre, Salilha Hammoumi, Ayi Santika, Zakki Zainun, Christophe Klopp, Sandro Klaflack, Sven Bergmann
INPUT OF NEXT GENERATION SEQUENCING INTO THE ANALYSIS OF POORLY STUDIED FISH VIRUSES: EXAMPLE OF CYPRINID HERPESVIRUS-3

COMPARATIVE PATHOGENICITY AND VIRULENCE OF *Vibrio parahaemolyticus* ISOLATES DERIVED FROM AN AHPND OUTBREAK IN THE PHILIPPINES

15:00 Xuan Dong, Jipeng Song, Jiayuan Chen, Hailiang Wang, Wenchao Wang, Yanbei Ren, Chengcheng Guo, Jie Huang
EVIDENCE FOR HORIZONTAL TRANSFER OF pVA1-LIKE PLASMIDS FROM AHPND-CAUSING *Vibrio*

15:40 Jie Huang, Xuan Dong, Qing-Li Zhang, Liang Qiu, Xiao-Yuan Wan, Guo-Si Xie, Bing Yang, Hai-Liang Wang, Qian Yang, Hua Xu, Xiu-Hua Wang
EMERGING DISEASES AND BIOSECURITY STRATEGIES FOR SHRIMP FARMING

16:00 Anton Immink, Darren Green, Jimmy Turnbull, Pau Badia, Nattakarn Saleetid, Putth Songsangjinda, Ernesto Morales, Dave Little, Lisa van Wageningen, Flavio Corsin
AN AQUACULTURE COMMONS SOLUTION: DEVELOPING AN AREA-BASED HEALTH MANAGEMENT APP FOR SHRIMP FARMING

16:20 Stella Paret, Dung Tu Thanh
IDENTIFICATION OF *Streptococcus agalactiae* IN RED TILAPIA *Oreochromis* spp. IN CAGE FARM IN THE MEKONG DELTA OF VIETNAM
09:00  Cecile Brugère, José Aguilar-Manjarrez, Malcolm Beveridge, Doris Soto  
THE ECOSYSTEM APPROACH TO AQUACULTURE TEN YEARS ON:  
STOCKTAKING AND WAY FORWARD

09:20  Joao Ferreira, Jose Aguilar-Manjarrez, Adele Boyd, Richard Corner,  
William F. Dewey, Bruno Fragoso, Jeremy Gault, Jon Grant, John Holmyard,  
John Icely, Johan Johansen, Heather Moore, Anne-Marie O´Hagan,  
Roberto Pastres, Matt Service  
CHALLENGES TO AQUACULTURE EXPANSION IN EUROPE AND NORTH  
AMERICA: AN INDUSTRY PERSPECTIVE

09:40  Elisa Ravagnan, Brita Gjerstad, Fiona Provan, Anne Vatland Krøvel,  
Megan Brunswig, Alessio Gomiero, Asbjørn Bergheim, Thorleifur Agustsson,  
Kathrine Skoland, Kristiane Lindland, Stephen Hynes, Gianna Fabi,  
Nora Tassetti  
AQUA ACCEPT: BUILDING KNOWLEDGE FOR A SUSTAINABLE AQUACULTURE  
INDUSTRY

10:00  Erika Maria Diletta Porporato, Daniele Brigolin, Roberto Pastres  
A SPATIAL MULTI-CRITERIA EVALUATION APPROACH TO SITE SELECTION  
OF ALLOCATED ZONES FOR AQUACULTURE

10:20  Joao G. Ferreira, Joao Lencart e Silva, Afifah Nasukha, Nyoman Radiarta,  
Antonio Santa Marta, Anton Immink, Rui Gomes Ferreira, Gede Sumiarsa  
INTEGRATED CARRYING CAPACITY MODELLING FOR SHRIMP AND FINFISH  
CULTURE IN INDONESIA

10:40  BREAK

11:10  Killian Chary, Myriam D. Callier, Joel Aubin, Denis Coves, Annie Fiandrino  
COMBINATION OF FARM, HYDRODYNAMIC AND PARTICLE TRACKING  
MODELS TO PLAN THE DEVELOPMENT OF ENVIRONMENTALLY  
SUSTAINABLE AQUACULTURE PROJECTS IN MAYOTTE ISLAND
11:30   Anton Immink, Jenna Stoner, Paul Bulcock, Pedro Sousa, Ernesto Morales, Thawit Thawit Chauychuwong
ADDRESSING THE TRAGEDY OF THE AQUACULTURE COMMONS – ASSESSMENT OF THE GOVERNANCE OF SHARED WATERS AND SHARED RISKS FOR THE AQUACULTURE INDUSTRY

11:50   Jose Aguilar-Manjarrez, Andy Dean, Lisa C. Wickliffe
GUIDANCE ON SPATIAL TECHNOLOGY FOR EMERGENCY PREPAREDNESS AND RESPONSE FOR AQUACULTURE

12:10   Liesbeth De Keukelaere, Els Knaeps, Dries Raymaekers, Robrecht Moelans
WATER QUALITY MAPPING WITH DRONES FOR AQUACULTURE MANAGEMENT

12:30   LUNCH

14:00   Maximilian Felix Schupp, Martina Bocci, Daniel Depellegrin, Andronikos Kafas, Ivana Lukic, Zacharoula Kyriazi, Gesche Krause, Vincent Onyango, Bela H. Buck
A TYPOLOGY OF MARINE MULTI-USE SCENARIOS

14:20   Øivind Bergh, Alexander Christian Beck, Eva Marie Skulstad, Guldborg Søvik, Erik Olsen, Trude Thangstad, Genoveva Gonzalez-Mirelis, Fabio Grati, Luca Bolognini
GIS-ANALYSIS OF SPATIAL CONFLICTS WITH LARGE SCALE SALMON AQUACULTURE IN A NORWEGIAN FJORD ECOSYSTEM

14:40   Guzel Yucel-Gier, Canan Eronat, Erdem Sayin
THE USAGE OF MODELLING FOR PLANNING SITE SELECTION AREA OF MARINE FISH FARM

15:00   Flávia Tavares de Matos, Rodrigo Roubach, Daniel Chaves Webber, Jones Simon, José Luiz Cabral, Eric Arthur Bastos Routledge, Guilherme Wolff Bueno
ZONING AND CARRYING CAPACITY OF PEIXE ANGICAL RESERVOIR FOR TAMBAQUI PRODUCTION
09:00  **Thomas Lecocq**, Lola Toomey, Pascal Fontaine  
**DEFINING UNITS WITH HIGH POTENTIAL FOR AQUACULTURE WITHIN SPECIES: TOWARDS AN INTEGRATION OF INTRASPECIFIC DIFFERENTIATION IN FISH DOMESTICATION PROGRAMS**

09:20  **Lola Toomey**, Fabrice Teletchea, Pascal Fontaine, Thomas Lecocq  
**IMPROVING *Perca fluviatilis* AQUACULTURE BY CONSIDERING POPULATION-SPECIFIC PERFORMANCES IN RECIRCULATING AQUACULTURE SYSTEM**

09:40  **Uroš Ljubobratović**, Geza Péter, Zsuzsana Sándor, Nándor Kugyela, Maciej Kwiatkowski, András Rónyai  
**THE EFFECT OF DURATION OF SPAWNING INDUCTION AND FEED ENRICHMENT WITH ARA-OIL ON THE REPRODUCTIVE PERFORMANCE OF VIRGIN ZANDER *Sander lucioperca* L. BREEDERS IN FULLY CONTROLLED CONDITIONS**

10:00  **Oleksandr Malinovskyi**, Jitka Kolárová, Miroslav Blecha, Jirí Krištan, Alžbeda Stará, Josef Velíšek, Tomáš Policar  
**HEMATOLOGICAL AND BIOCHEMICAL CHANGES IN BLOOD OF PIKEPERCH *Sander lucioperca* THROUGHOUT SEMI-CONTROLLED REPRODUCTION**

10:20  **Daniel Zarski**, Joanna Nynca, Berenice Schaerlinger, Pascal Fontaine, Andrzej Ciereszko, Julien Bobe  
**EGG QUALITY DETERMINANTS IN PIKEPERCH *Sander lucioperca* – IMPLICATIONS FOR AQUACULTURE**

10:40  **BREAK**

11:10  **Azin Mohagheghi Samarin**, Azadeh Mohagheghi Samarin, Daniel Zarski, Miroslav Blecha, Jiri Kristian, Dariusz Kucharczyk, Tomas Policar  
**IN VITRO STORAGE OF THE EGGS IN PIKEPERCH *Sander lucioperca* AND EURASIAN PERCH *Perca fluviatilis***

11:30  **Gergely Bernáth**, Ákos Horváth, Daniel Zarski, Levente Várkonyi, Béla Urbányi, Zoltán Bokor  
**PERSPECTIVES OF SPERM CRYOPRESERVATION IN PERCID FISH, “PAST-PRESENT-FUTURE”**
11:50 **Tomas Policar**, Oleksandr Malinovskyi, Miroslav Blecha, Jiri Kristan, Azin Mohagheghi Samarin
POST-SPAWNING TREATMENT AND MORTALITY ELIMINATION AFTER TWO DIFFERENT SPAWNING TECHNIQUES IN POND-CULTURED PIKEPERCH *Sander lucioperca* BROODSTOCK

12:10 **Miroslav Blecha**, Oleksandr Malinovskyi, Lukáš Veselý, Tomáš Policar
SWIM BLADDER INFLATION FAILURE IN POND-CULTURED PIKEPERCH *Sander lucioperca* LARVAE

12:30 **LUNCH**

14:00 **Aiman Imentai**, Carlos Yanes-Roca, Tomas Policar
OPTIMIZATION OF PIKEPERCH *Sander lucioperca* FIRST FEEDING WITH ROTIFERS *Brachionus plicatilis*

14:20 **Katarzyna Palinska-Zarska**, Daniel Zarski
EFFECT OF THE DOMESTICATION PROCESS ON THE INTENSIVE REARING OF PERCH *Perca fluviatilis* LARVAE

14:40 **Harri Vehviläinen**, Jari Riihimäki, Markus Kankainen, Juha Koskela, Matti Janhunen, Antti Forsman, Jari Niukko, Markku Vaajala
POTENTIAL OF PIKEPERCH ONGROWING IN BALTIC SEA

15:00 **Edson Panana Villalobos**, Dieter Anseeuw, Stefan Teerlinck
GROWTH HETEROGENEITY IN PIKEPERCH *Sander lucioperca* PRODUCTION: FROM LARVAE TO TARGET WEIGHT

15:20 **Jurica Jug Dujakovic**, Steven Van Gorder, Ana Gavrilovic, Alexis Conides
CULTIVATION OF YELLOW PERCH *Perca flavescens* (MICHILL, 1814) FROM THE LARVAL STAGE TO THE MARKET SIZE IN A CLOSE RECIRCULATION SYSTEM

15:40 **Kathrin Steinberg**, Jan Zimmermann, Stefan Meyer, Carsten Schulz
IDENTIFICATION OF THE MOST FAVOURABLE COMBINATION OF ENVIRONMENTAL PARAMETERS FOR GROW-OUT OF PIKEPERCH *Sander lucioperca*

16:00 **Terence Barry**, Gavin Dehnert, Paul Hoppe, Peter Sorensen
CHEMICALS RELEASED BY PREDATION INCREASE THE GROWTH RATE OF YELLOW PERCH *Perca flavescens*
16:20  Jan Zimmermann, Kathrin Steinberg, Stefan Meyer, Carsten Schulz
EFFECT OF DIETARY LIPID AND CARBOHYDRATE ENERGY RATIO ON ONGROWING PIKEPERCH *Sander lucioperca* IN COMMERCIAL SCALE RAS

16:40  Melanie Rupp, P-D. Sindilariu, R. Knüsel, B. von Siebenthal, H. Schmidt-Posthaus
RISK MANAGEMENT TO MINIMIZE DISEASE-ASSOCIATED ECONOMIC LOSSES IN AQUACULTURE OF NEW FISH SPECIES – IDENTIFICATION OF INFLUENCING PATHOGENS

17:00  Nima Hematyar, Sabine Sampels, Trine Kastrup Dalsgaard, Jan Mraz
PROTEOME CHANGES OF EURASIAN PERCH *Perca fluviatilis* FILLET FROM TWO DIFFERENT REARING SYSTEMS INFLUENCED BY FROZEN STORAGE

INTEGRATED MULTI-TROPHIC AQUACULTURE - CONTINUED
Tuesday, August 28  09:00 - 17:20  Antigone 3
Chair: Thierry Chopin

09:00  E. Cunha, H. Ferreira, A. Parejo, G. Brito, G. Favot, S. Gamito
UNDERSTANDING THE INDIVIDUAL ROLE OF FISH, OYSTER AND MACROALGAE IN THE ECOLOGY OF INTEGRATED PRODUCTION IN EARTHEN PONDS

09:20  Sarah Nahon, Goncalo Villa de Brito, Hugo Quental-Ferreira, Joel Aubin, Maria Emilia Cunha
FATTY ACIDS AND STABLE ISOTOPIES AS TRACERS OF FOOD ASSIMILATION IN FISH-OYSTER-MACROALGAE INTEGRATED MULTI-TROPHIC AQUACULTURE PONDS

09:40  Sofia Gamito, Hugo Ferreira, Aida Parejo, Joel Aubin, Villy Christensen, Maria Emília Cunha
MODELLING THE ECOSYSTEM OF A MULTI-TROPHIC INTEGRATED PRODUCTION OF FISH, OYSTERS AND MACROALGAE IN EARTHEN PONDS

10:00  Sofia Gamito, Hugo Ferreira, Aida Parejo, Joel Aubin, Villy Christensen, Maria Emília Cunha
DYNAMIC MODELLING OF A MULTI-TROPHIC INTEGRATED PRODUCTION OF FISH, OYSTERS AND MACROALGAE IN EARTHEN PONDS

10:20  Victor Baizeau, Sarah Nahon, Sofia Gamito, Christophe Jaeger, Joël Aubin
IMTA ECOPATH MODEL METHODOLOGY: FOCUS ON A POND POLY Culture SYSTEM
10:40  BREAK

11:10  Ben Shahar, Amir Neori, Muki Shpigel, Lior Guttman
AN INTEGRATED ULVA-PERiphyTON BIOFILTER FOR BOTH AMMONIA AND
NITRATE IN FISHPONDS EFFLUENT

11:30  Jean-Michel Mortillaro, Ezra Andoniaina Raminoharisoa,
Diana Edithe Andria-Mananjara, Tiana Herimanana Randriamihanta,
Harilala Andriamaniraka, Rija Andriamarolaza, Modestine Raliniaina,
Olivier Mikolasek, Lionel Dabbadie, Patrick Andrianetsy, Philippe Martel
IMPROVEMENT OF RICE-FISH CULTURE FROM TROPICAL
AGROECOSYSTEMS FERTILIZATION, ANTANANARIVO, MADAGASCAR

11:50  Simon Rukera Tabaro, Onissimo Mutanga, Jean-Claude Micha
NUTRIENT FLOW IN AN INTEGRATED RABBIT-FISH–RICE SYSTEM IN
RWANDA

12:10  Domenico Caruso, Reza Samsudin, Angela Lusiastuiti, Desy Sugiani,
Simon Pouil, Jacques Slembrouck
ECOLOGICAL INTENSIFICATION OF GIANT GOURAMI PONDS IN INDONESIA:
BIOLOGICAL EFFECTS OF Azolla filiculoides IN TOTAL OR PARTIAL
REPLACEMENT OF COMMERCIAL FEED ON JUVENILES OF GIANT GOURAMI
Osphronemus goramy

12:30  LUNCH

14:00  Efthimia Cotou, Eleni Fountoulaki, Mando Kotsiri, Alexandros Alexandratos,
Morgan Henry, Dimitra Kogiannou, Georgios Rigos, Afrodite Androni,
Ageliki Konstadinopoulou, Georgia Assimakopoulou
AVAILABILITY AND ENVIRONMENTAL EFFECTS OF COMMERCIAL FEEDS
(FISH MEAL VS. PLANT MEAL BASED) AND FISH FEED WASTE IN AN IMTA
SYSTEM OF FISH, FILTER- AND DEPOSIT- FEEDERS: A MULTI-INDICATOR
ASSESSMENT APPROACH

14:20  Wenresti Gallardo, Balqees Al-Rashdi, Mohammed Al-Mahfudhi, Gilha Yoon,
Hussein Al-Masroori
DEVELOPMENT OF A LAND-BASED RECIRCULATING INTEGRATED MULTI-
TROPHIC AQUACULTURE (IMTA) SYSTEM

14:40  José Pintado, Patricia Ruiz, Joan Oca, Ingrid Masaló, Patricia Jiménez,
Javier Cremades
STUDY OF THE BACTERIAL COMMUNITIES OF THE SEAWEED Ulva spp.
HOLOBIONT TO BASE MANAGEMENT STRATEGIES FOR THE CONTROL OF
HARMFUL BACTERIA IN IMTA-RAS
15:00  Emmanuelle Roque d’orbcastel, Mathieu Lutier, Emilie Le Floch, Sarah Nahon, Sébastien Triplet, Thibault Geoffroy, Myriam D. Callier, Eric Fouilland
ROLE OF MICROALGAE IN A LANDBASED MULTI-TROPHIC AQUACULTURE SYSTEM: BIOREMEDIATION, PRODUCTION, BIOCHEMICAL COMPOSITION

15:40  Mark Carras, Duncan Knowler, Christopher Pearce, Thierry Chopin
ECONOMIC COMPARISON OF SALMON MONOCULTURE VERSUS A THREE-COMPONENT INTEGRATED MULTI-TROPHIC AQUACULTURE (IMTA) SYSTEM: A DISCOUNTED CASH-FLOW ANALYSIS OF AQUACULTURE OPERATIONS IN EASTERN CANADA

16:00  Bertrand Jacquemin, Jessica Ratcliff, Anna Soler Vila
INTEGRATED MULTI-TROPHIC AQUACULTURE (IMTA) BEST PRACTICES: STATE-OF-THE-ART IN THE ATLANTIC AREA

16:20  Ivo Monteiro, Maria João Rodrigues, Chloé Placines, Pedro Pousão, Luísa Custódio
ASSESSING THE POTENTIAL OF A MEDICINAL HALO PHYTE SPECIES TO BE PRODUCED IN INTEGRATED MULTI-TROPHIC AQUACULTURE (IMTA) SYSTEMS: GROWTH PERFORMANCE AND FUNCTIONAL PROPERTIES

16:40  Kevan Main, Suzanne Boxman
DEVELOPING LAND-BASED INTEGRATED MARINE AQUACULTURE SYSTEMS FOR SUSTAINABLE SEAFOOD PRODUCTION

17:00  Oyama Siqwepu, Khalid Salie, Neill Goosen
OPTIMIZATION OF NUTRIENT INPUT TO INTEGRATED AQUAPONICS SYSTEMS THROUGH MINERAL SUPPLEMENTATION BY WAY POTASSIUM FEED ADDITIVES

PROTEIN AND LIPID SOURCES
Tuesday, August 28  09:00 - 17:20  Pasteur Auditorium
Chair: Sandrine Skiba

09:00  Guillaume Le Reste, Pierrick Kersanté, Luxsanawadee Soonngam, Romain Le Hen, Joël Duperray
EFFECTS OF A SUSTAINABLE MIX OF FREE AMINO ACIDS ON GROWTH PERFORMANCE AND FEED UTILIZATION OF WHITE SHRIMP Litopenaeus vannamei JUVENILE REARED IN POND
09:20 Manuela E. Pintado, Glenise B. Voss, Paulo Rema, M. Manuela E. Pintado, Luisa M.P. Valente
EFFECT OF AUTOCLAVING PROCESS AND ENZYMATIC HYDROLYSIS OF OKARA (BYPRODUCT FROM SOY BEVERAGE) ON GROWTH OF NILE TILAPIA *O. niloticus*

09:40 Theophilus Babalola, John Olasunkanmi, Omoyemi Omolounnu
EVALUATION OF *Moringa oleifera* SEED MEAL AS REPLACEMENT FOR FISHMEAL IN *Clarias gariepinus* FINGERLING DIETS

10:00 Celine De Maesschalck, Daniel Lemos, Fanny Yasumaru, Roeland Wouters, Geert Rombaut
*IN VITRO* SCREENING OF PROTEIN HYDROLYSIS (DH, pH-stat) USING STAGE-SPECIFIC ENZYME EXTRACTS OF *L. vannamei* LARVAE AND POSTLARVAE

10:20 Juan Pablo Lazo, Jorge Madrid, Camilo Pohlenz, María Teresa Viana
DIETARY LYSINE REQUIREMENT FOR JUVENILE TOTOABA *Totoaba macdonaldi*

10:40 BREAK

11:10 Anna Fickler, Stefanie Staats, Gerald Rimbach, Carsten Schulz
INCREASING DHA LEVELS IN RAINBOW TROUT *Oncorhynchus mykiss*

11:30 Mustafa Yildiz, Tufan O. Eroldogan, Samuel Ofori-Mensah, Kenan Engin, M. Ali Baltaci
THE EFFECTS OF FISH OIL REPLACEMENT BY VEGETABLE OILS ON GROWTH PERFORMANCE AND FATTY ACID PROFILE OF RAINBOW TROUT: RE-FEEDING WITH FINISHING DIET IMPROVED BODY HUFA CONTENTS

11:50 Murat Arslan, Seyda Tacer, Saltuk Bugrahan Ceyhun, Ahmet Topal
MUSCLE EPA AND DHA LEVELS CORRELATE WITH DIETARY LINOLENIC ACID IN VEGETABLE OIL FED RAINBOW TROUT

12:10 Sinem Zeytin, Carsten Schulz, Bernd Ueberschär
EVALUATING THE GROWTH PERFORMANCE AND DIGESTIVE ENZYME CAPACITY UNDER CONSIDERATION OF NATURAL PRODUCTS FROM COPEPODS IN MICRODIETS FOR SEA BASS *Dicentrarchus labrax* LARVAE

12:30 LUNCH
14:00  **Alvaro Rodriguez Sanchez-Arevalo**, Cristina Garcia, Antonio Martinez, Gustavo Espelleta  
**EFFECT OF SUPPLEMENTAL ADDITIVE EMULSIFIER ON THE GROWTH PERFORMANCE AND NUTRIENT UTILIZATION IN EUROPEAN SEABASS Dicentrarchus labrax**

14:20  **Julian M. Foerster**  
**INSECTS AS A SUBSTITUTE FOR FISHMEAL**

14:40  **Amélie Drouault**, Emily Glenn, Ricardo Ekmay  
**PRODUCTION OF A HIGH-PROTEIN INGREDIENT FROM WOOD: ARBIOM SYLPRO® IS A NUTRITIONAL, ECONOMICAL, TRACEABLE AND SUSTAINABLE ALTERNATIVE PROTEIN SOURCE FOR USE IN AQUAFEEDS**

15:00  **Cansu Metin**, Mustafa Hacisa, Yunus Alparslan, Ertan Ercan, Ali Günlü, Taçnur Baygar  
**EFFECT OF DIFFERENT TEMPERATURE AND TIME APPLICATION IN ULTRASONIC WATER BATH ON THE LIPID QUALITY OF Schizochytrium sp.**

15:40  **Mustafa Hacisa**, Ertan Ercan, Yunus Alparslan, Cansu Metin, Ali Günlü, Taçnur Baygar  
**EFFECT OF DIFFERENT SOLVENT RATIO USAGE ON LIPID YIELD OF Schizochytrium sp.**

16:00  **David Benhaim**, Alexandra Leeper, Birgir Örn Smárason, Jón Árnason  
**REPLACING SOY WITH BLACK SOLDIER FLY LARVAE IN AQUAFEEDS FOR JUVENILE ATLANTIC SALMON AFFECTS GROWTH, SWIMMING ACTIVITY AND BOLDNESS**

16:20  **Willy Verstraete**, Kim Windey, Danny Vanmullem  
**UPGRADING OF AMMONIA CO2 AND MINERALS TO MICROBIAL PROTEIN FOR FEED PURPOSES**
This industry forum is presented by Competence Network Aquaculture (KNAQ) and Excellence Cluster Future Ocean of Christian-Albrechts University Kiel, Germany in cooperation with EUROSHRIMP network.

14:00 Stefan Meyer, KNAQ  
WELCOME

14:10 Matt Slater, Euroshrimp / AWI  
INTRODUCTION TO EUROSHRIMP NETWORK

14:20 European Commission  
STATUS AND PERSPECTIVES OF EU IMPORT REGULATIONS FOR (LIVE SHRIMP

14:40 Kartik Baruah, Swedish University of Agricultural Sciences (SLU)  
RECENT DEVELOPMENTS IN GLOBAL SHRIMP HEALTH MANAGEMENT

15:00 Craig Browdy, Zeigler Bros., Inc.  
STRUCTURAL ANALYSIS OF THE SHRIMP PRODUCTION SECTOR FROM AN INDUSTRY PERSPECTIVE

15:20 Felipe Vieira, Universidade Federal de Santa Catarina - UFSC  
CURRENT STATUS OF SHRIMP FARMING IN BRAZIL

15:40 Eric De Muylder, CreveTec  
REPRODUCTION OF P. vannamei IN EUROPE

16:00 Round Table Session  
- Reproduction of P. vannamei in Europe  
- Import/export regulation of live shrimp from/to Europe  
- Needs for international cooperation in R&D, technology, etc.

16:50 Report from workshop session tables

17:00 Stefan Meyer, KNAQ  
Conclusion

The workshop results will be published on www.euroshrimp.de/en and through EAS.
GENERAL CONTRIBUTED 2
Tuesday, August 28  14:00 - 17:20  Tiberade
Chair: Javier Roo Filgueira

14:00  **Javier Roo**, Carlos Do Pazo, Jose Luis Muñoz
GREATER AMBERJACK AQUACULTURE NATIONAL PLAN - ANP SERIOLA:
DIVERSIFICATION OF SPANISH AQUACULTURE THROUGH THE
OPTIMIZATION OF GREATER AMBERJACK *Seriola dumerili* CULTURE

14:20  **Marta Castilla-Gavilán**, Bruno Cognie, Vincent Turpin, Priscilla Decottignies
EVALUATION OF THE NUTRITIONAL VALUE OF DRIED MACROPHYTES AS AN
ALTERNATIVE DIET FOR ADULTS OF THE REARED SEA URCHIN *Paracentrotus lividus*

14:40  **Mohammad Sayyadbourani**, Mohammad Pourkazemi, Bahman Mohammaditabar, Mahdi Golshan, Alireza Valipour, SeiedReza Mortezaei
INTRODUCING OF PIKEPERCH *Sander lucioperca* TO AQUACULTURE SYSTEM
IN IRAN

15:00  **Fei Xu**, Ferdinand Marlétaz, Daria Gavriouchkina, Tatjana Sauka-Spengler, Guofan Zhang, Peter Holland
OYSTER INSULIN-LIKE GENES AND THEIR POSSIBLE FUNCTIONS

15:20  BREAK

15:40  **Xiao Liu**, Yanglei Jia, Suping Zhang
EFFECT OF SALINITY ON Na+/K+-ATPase IN PACIFIC ABALONE

16:00  **Robin Muzzerall**, Derek Hori
ARCTIC CHARR PRODUCTION IN CANADA

16:20  **Quy Moc Ong**, Ravi Fotedar, Thy Thi Truong Ho
EXTENSION OF ROTIFERS *Brachionus plicatilis* INCLUSIONS AND
ENRICHMENT OF LIVE FOOD WITH PROBIOTIC IN THE LARVAL FEEDING
REGIMES OF MUD CRAB *Scylla paramamosain*: EFFECTS ON SURVIVAL,
GROWTH, METAMORPHOSIS AND DEVELOPMENT TIME

16:40  **Christina Kriaridou**, Alexandros Tsakogiannis, Tereza Manousaki, Stavroula Oikonomou, Nikos Papandroulakis, Constantinos C. Mylonas, Dimitrios Chatziplis, Costas S. Tsigenopoulos
QTL MAPPING FOR BODY WEIGHT IN EARLY GROWTH STAGES OF COMMON
DENTEX *Dentex dentex*
17:00 Andrea Franke, Catriona Clemmesen, Peter De Schryver, Joanna J. Miest, Linsey Garcia-Gonzalez, Till Bayer, Sven Künzel, Peter Bossier, Olivia Roth
THE EFFECT OF POLY-HYDROXYBUTYRATE ON IMMUNE GENE EXPRESSION, MICROBIAL COMMUNITY AND SURVIVAL IN EUROPEAN SEA BASS LARVAE

GENERAL CONTRIBUTED 3
Tuesday, August 28    14:00 - 17:20    Barthez
Chair: TBA

14:00 Rosa Chapela, Margrethe Aanesen, Sveinn Agnarsson, Soren Q. Eliassen, Mercedes Fernández, Stéphane Ganassali, Olavur Gregersen, Birgit Hagen, Xavier Irz, Heather Manuel, Davide Menozzi, Cristina Mora, Francis Murray, Thong Tien Nguyen, Petter Olsen, José L. Santiago, Louis-Georges Soler, Gudmundur Stefánsson, Lucas Sterenn, Björn Suckow, Olga Untilov, Paul S. Valle
THE PRIMEFISH PROJECT: AN OUTLOOK OF THE COMPETITIVENESS AND ECONOMIC SUSTAINABILITY OF THE AQUACULTURE SECTOR

14:20 Gustavo Espelleta, Alvaro Rodriguez, Antonio Martinez, Alicia Esteve
EFFECT OF NATURAL FEED ADDITIVE ON THE INFESTATION CAUSED BY Sparicotyle chysophrii (MONOGENEA: POLYOPISTOCOTYLEA) IN GILDHEAD SEABREAM Sparus aurata

14:40 Samuel A.M. Martin, Carola E. Dehler, Christopher J. Secombes
INTESTINAL MICROBIOTA PROFILE CHANGES FOLLOWING SEAWATER TRANSFER IN ATLANTIC SALMON Salmo salar

15:00 Eliana Marcela Betancur González, Juan David Cano Gil, Luz Adriana Gutiérrez
VARIABLES ZOOTÉCNICAS Y COMPARACIÓN DE EPITELIOS INTESTINALES EN TILAPIA Oreochromis sp. SUPLEMENTADA CON PROBIÓTICOS
A CONVERSATION WITH THE AQUAFISH INNOVATION LAB
ON THE FUTURE OF SUSTAINABLE AQUACULTURE
Tuesday, August 28  14:00 - 17:20  Sully 1
Chair: Hilary Egna
Invited co-chairs: Tran Thi Thanh Hien, Judith Amadiva, Nelson Agbo

14:00  Panel One: Moderator: Nikita Gopal
WHAT IS NEEDED NOW IN 2018 TO MAKE AQUACULTURE A VITAL
 ENTERPRISE FOR SMALLHOLDERS IN AFRICA?
Invited Panelists: Gertrude Atukunda, Daniel Adjei-Boateng, Narriman Jiddawi,
Enos Mac’Were, and Abudala Napuru

15:05  Panel Two: Moderator: Kay Lwintun
EMERGING TECHNOLOGIES FROM AQUAFISH INNOVATION LAB RESEARCH
Invited Panelists: Pham Minh Duc, Nen Phanna, Shahroz Mahean Haque,
Sunil Rai, and John Walakira

16:10  Panel Three: Moderator: Maymyat Noe Lwin
SHARED LESSONS FROM HIGH-PRODUCING ASIAN AND LAC COUNTRIES
FOR HIGH PRODUCING AFRICAN COUNTRIES
Invited Panelists: Phu Hoa, Yuan Derun, Md. Abdul Wahab, Oludare Adeogun,
Victoria Tarus

17:10  Session Summary
Invited Rapporteurs: James Bukenya, Russell Borski, Wilfrido Contreras

NEW AND FLEXIBLE APPROACHES TO AQUACULTURE LICENSING
(TAPAS)
Tuesday, August 28  14:00 - 17:30  Joffre 4
Chair: Frank Kane

This seminar is will deliver the current outcomes of the TAPAS project
and detail the suggested new approaches to aquaculture regulation -
facilitating engagement with stakeholders in the proceeding workshop

14.00  TBC
THE TAPAS TOOLBOX

14.15  Frank Kane, Joanne Casserly & TBC
NEW TOOLS FOR REGULATION, EFFECTIVE LICENSING AND DECISION
MAKING
WORKSHOP – Contribute to new approaches to aquaculture licensing and regulation, and help prioritise issues, by engaging with project partners to shape the outcomes

15.00 BREAK OUT SESSION 1: Stakeholder discussion on new tools and approaches

15.30 BREAK OUT SESSION 2: Stakeholder input on delivery and dissemination of final project outputs

16.00 RAPPORTEUR INPUT FROM BREAKOUT SESSIONS

16.20 CLOSING REMARKS

EXPANDING AQUACULTURE WITHIN THE PLANETARY BOUNDARIES
Tuesday, August 28 14:00 - 17:20  Einstein Auditorium
Chairs: Patrick Henrickson, Max Troell

14:00 Patrik Henriksson, Max Troell, Lauren Banks, Ben Belton, Malcolm Beveridge, Dane Klinger, Nathan Pelletier, Michael Phillips, Nhuong Tran
AQUACULTURE’S POTENTIAL ROLE AS A SUSTAINABLE PROTEIN SOURCE

14:20 Max Troell
TBA

14:40 Ben Belton
TBA

15:00 Dave Little
TBA

15:20 Simon Bush
TBA
OUTERMOST REGIONS AND ISLANDS
Wednesday, August 29   09:00 - 10:40   Sully 3
Chair: Ricardo Haroun

09:00  Gercende Courtois de Viçose, María de Pino Viera, Ricardo Haroun
SUSTAINABLE AQUACULTURE PRODUCTION IN OUTERMOST REGIONS:
FOCUS ON LOCAL AND HIGH-VALUE AQUACULTURE PRODUCTS

09:20  Bruno Minuzzi Schemes, Andrej Abramic, Ricardo Haroun,
Ana Cristina Matos Costa, Andrea Zita Botelho
AQUACULTURE AND MARINE PROTECTED AREAS: IDENTIFICATION OF
POSSIBLE COEXISTENCE AREAS IN MACARONESIA

09:40  Natacha Nogueira, Lydia Png-Gonzalez, Carlos Andrade
ENVIRONMENTAL IMPACT ASSESSMENT UNDER MSFD FOR AQUACULTURE
IN THE MACARONESIA

10:00  Fabrice Teletchea
HOW TO PROMOTE AQUACULTURE DEVELOPMENT IN EUROPEAN
OVERSEAS: THE CASE OF SAINT-PIERRE AND MIQUELON

RESTORATION PROJECTS USING AQUACULTURE ORGANISMS
Wednesday, August 29   09:00 - 10:40   Antigone 1
Chair: Pauline Kamermans

09:00  Jildou Schotanus, Jacob Capelle, Lennet Leuchter, Johan van de Koppel,
Tjeerd Bouma
USING MUSSELS FROM SPAT COLLECTORS FOR RESTORATION PROJECTS:
The importance of phenotypic plasticity

09:20  Luke Helmer, Morven Robertson, Jo Meekley, Ian Hendy, Joanne Preston
THE EFFICACY OF SUSPENDED BROODSTOCK CAGES AS A RESTORATION
STRATEGY FOR THE EUROPEAN FLAT OYSTER Ostrea edulis (LINNAEUS,
1758): A CASE STUDY IN THE SOLENT, UK

09:40  Pauline Kamermans, Brenda Walles, Marloes Kraan, Luca van Duren,
Frank Kleissen, Tom van der Have, Aad Smaal, Marnix Poelman
OFFSHORE WIND FARMS AS POTENTIAL LOCATIONS FOR FLAT OYSTER
Ostrea edulis RESTORATION IN THE DUTCH NORTH SEA
10:00  Gianni Brundu, Simone Farina, Paolo Domenici  
RESTOCKING OF SEA URCHIN: LABORATORY-RAISED INDIVIDUALS OF 
*Paracentrotus lividus* KNOW THE WAY

10:20  Zoë Holbrook, Antony Jensen, Malcolm Hudson, Morven Robertson,  
Simón Harding, Chris Hauton  
ELEVATED BEDS: A SOLUTION FOR EUROPEAN NATIVE OYSTER RESTORATION?

10:40  Kenneth Leber, Ryan Schloesser, Paula Caldentey, Nathan Brennan,  
Charles Peterson  
HATCHERY-REARED JUVENILE SNOOK AS ECOLOGICAL PROBES FOR  
HABITAT QUALITY

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**TUNA**  
Wednesday, August 29  09:00 - 11:20  Barthez  
Chair: Alejandro Buentello

09:00  Christopher Bridges, Robert Vassallo-Agius, Dimitra Nousdili, Florian Borutta,  
Stephan Schulz, Mark Psaila, Salvu Ellul  
TUNA OCEAN RESTOCKING (TOR) PILOT STUDY: SEA-BASED HATCHING AND  
RELEASE OF ATLANTIC BLUEFIN TUNA LARVAE IN THE MEDITERRANEAN  
FROM A CAPTIVE DNA FINPRINTED BROODSTOCK – THEORY AND PRACTICE

09:20  Sho Shirakashi, Tomoki Honryo, Masato Kawahara, Kazuo Ogawa  
POSSIBILITY FOR NON-DRUG CONTROL OF BLOOD FLUKE INFECTIONS IN  
FARMED BLUEFIN TUNA

09:40  Amal Biswas, Takayuki Ohnishi  
FEEDING FREQUENCY ON GROWTH AND ENERGY PARTITIONING OF PACIFIC  
BLUEFIN TUNA *Thunnus orientalis* JUVENILES

10:00  Kathryn Schuller, Arif Malik, Kathryn Dickson, Ethan Estess, Charles Farwell,  
Ko Fujioka, Takashi Kitagawa  
ONTOGENETIC TRANSITION FROM ECTOTHERMY TO ENDOTHERMY IN  
PACIFIC BLUEFIN TUNA *Thunnus orientalis*

10:20  Muhammad Siddik, Janet Howieson, Ravi Fotedar  
SUITABILITY OF USING TUNA HYDROLYSATE FROM TUNA *Thunnus maccocyii*  
PROCESSING INDUSTRY AS AN ALTERNATIVE FISHMEAL PROTEIN SOURCE  
FOR JUVENILE BARRAMUNDI *Lates calcarifer* (BLOCH, 1790)

10:40  Alejandro Buentello, Mark Albertson  
FORMULATED PACIFIC BLUEFIN TUNA DIETS IMPROVE FLESH QUALITY AND  
INCREASE SHELF LIFE OF SASHIMI-GRADE PRODUCT
ADAPTATION TO CLIMATE CHANGE AND OCEAN ACIDIFICATION
Wednesday, August 29    09:00 - 12:00    Rondelet
Chair: Lynne Falconer

09:00    Lynne Falconer, Bruce McAdam, Elisabeth Ytteborg, Øystein Hermansen, Solfrid Sætre Hjøllo, Trevor Telfer
CLIMATE CHANGE, SEA SURFACE TEMPERATURE AND SALMON AQUACULTURE IMPLICATIONS

09:20    Samuel O. Akande
MODELLING CLIMATE CHANGE IMPACTS AND ADAPTATION ON AQUACULTURE IN THE GULF OF GUINEA COAST

09:40    Sarah Howald, Louise Cominassi, Hanna Scheuffele, Guy Claireaux, Hélène Ollivier, Nicolas LeBayon, Felix C. Mark
MITOCHONDRIAL METABOLISM UNDER PROLONGED OCEAN ACIDIFICATION AND WARMING IN EUROPEAN SEA BASS HEARTS

10:00    Gergo Gyalog, Mónika Varga, Béla Csukás
IMPACT OF CLIMATE CHANGE ON THE PRODUCTION COSTS IN HUNGARIAN CARP AQUACULTURE

10:20    Joao G. Ferreira, Alhambra M. Cubillo, Pauline Kamermans, Joao Lencart e Silva, Frans-Joost Boogert, Susan Kay, Cornelia Kreiß, Ralf Döring
FORECASTING CLIMATE CHANGE EFFECTS ON SHELLFISH AQUACULTURE: A MODEL ANALYSIS

10:40 BREAK

11:10    Thomas Guyondet, Ramón Filgueira, Luc A. Comeau, Réjean Tremblay, Chris Pearce
BIVALVE AQUACULTURE-ENVIRONMENT INTERACTIONS IN THE CONTEXT OF CLIMATE CHANGE

11:30    Gregor Reid, Helen Gurney-Smith, Mark Flaherty, Amber Garber, Kathy Brewer-Dalton, Duncan Knowler, David Marcogliese, Thierry Chopin, Richard Moccia, Ian Forster, Caitlin Smith, Sena De Silva
CLIMATE CHANGE AND AQUACULTURE: CONSIDERING ADAPTATION POTENTIAL

11:50    Erhowose Emmanuel Omovwohwovie, P.A. Ekokotu, E.I. Arnold, E.S. Osaide
HAEMATOLOGICAL EFFECT OF IRON AND LEAD ON Clarias gariepinus JUVENILES

12:10    Doris Soto, Jorge Leon-Muñoz, Jorge Dresdner, Carol Luengo, Fabian Tapia, Rene Garreaud
SALMON FARMING VULNERABILITY TO CLIMATE CHANGE IN SOUTHERN CHILE AND MANAGEMENT OPTIONS FOR A SUSTAINABLE FUTURE
Aquaculture in the Mediterranean bordering countries has grown substantially during the past decades, helping meet the rising demand for fishery products, and contributing in increasing food security, employment and economic development. However, further development of aquaculture raises concerns in terms of sustainability in the long term, including from a social perspective. In fact, it is increasingly acknowledged that in many instances, one challenge to aquaculture growth is linked to social concerns and the acceptability of the sector.

Social acceptability of aquaculture development (SA) is an integral part of sustainability and refers to social licence to operate and the degree to which aquaculture activities are accepted or precluded by the public at large. This is an issue being debated in several fora that have highlighted the need to address the SA in terms of increasing the public understanding of aquaculture.

SA is quite an intangible entity influenced by “critical factors” and it can vary according to the general public’s perception and misconception of the sector, to the stakeholders involved and their main characteristics, and to the typology, objective and activities of aquaculture, often linked to local conditions. Understand the drivers that influence SA including social structure, issues and vision of the various individuals, groups and organisations, could help unlock the development potentiality of aquaculture and develop sustainable models that can also contribute building consensus around aquaculture activities.

In this context, the workshop takes stock of current knowledge of SA, on the general public’s awareness of aquaculture and with a special perspective from coastal and local communities, and presents and discusses the preliminary results of a study to assess critical factors, local drivers and peculiarities that influence SA particularly in the Mediterranean region. These will provide the basis for a Q&A session so as to fine-tune and enrich the findings and contribute in increasing knowledge on SA and identify practical actions. The workshop is carried out within the “Social Acceptability and Governance work package (WP-7)” of the EU H2020 MedAID project organized in cooperation with EU H2020 PerformFISH and the outcomes will provide key elements to be considered for the preparation of the “Guidelines in support of SA of sustainable aquaculture development in the Mediterranean” to accompany governance and decision-making processes with practical methods and actions to improve SA.
09:00 OPENING OF THE WORKSHOP

09:30 SESSION 1: FRAMING THE SOCIAL ACCEPTABILITY OF AQUACULTURE
Moderator: Pablo Ávila Zaragozá

This session will propose four presentations delivered by keynote speakers outlining different aspects of SA including the preliminary results of the on-going MedAID study. A few questions from the audience will follow each presentation.

- Public involvement in governance and SA of aquaculture (Marianna Cavallo, Ifremer)
- Consumer attitude towards aquaculture products (Katia Tribilustova, Eurofish)
- Disinformation and SA of aquaculture; A case from Mersin-Turkey (Ferit RAD, Mersin University)
- Preliminary results of the MedAID study to assess critical factors and drivers that influence SA of aquaculture (Davide Fezzardi, FIAM - FAO)

10:30 SESSION 2: PANEL DISCUSSION: SOCIAL ACCEPTABILITY AS KEY DRIVER FOR AQUACULTURE DEVELOPMENT
Moderator: Pablo Ávila Zaragozá

Panel will be composed by representatives from aquaculture farmers, farmers’ organizations, administrations dealing with aquaculture (national and local level), NGOs, media, researchers on social aspects of governance and a representation of wholesalers.

The provisional list is as follows: Milena Krasic, Eva Pereiro, Konstantinos Koutsis, Pier Antonio Salvador, Malek Mtimet, Sinan Toplu, Valentina Topedino, Manel Ben Ismail, Rosa Flos, Bassols (tbc), Jean-Emmanuel Rougier

12:30 OPEN DISCUSSION WITH THE AUDIENCE AND CONCLUSION
09:00  **Amilcar Arenal**, Adrian Toledo, Laureano Frizzo, Marcelo Signorini, Peter Bossier  
**IMPACT OF PROBIOTICS ON GROWTH PERFORMANCE AND SHRIMP SURVIVAL: A META-ANALYSIS**

09:20  **Mahmoud Eltholth**, Rachel Lawrence, Toms Joseph, Neelima Nair, Bibin Kalirakath, Mohanakumaran Nair, Francis Murray  
**ASSESSMENT OF THE EFFECTIVENESS AND COST BENEFIT OF PROPHYLACTIC HEALTH PRODUCTS IN SHRIMP**

09:40  **Mahmoud Eltholth**, William Leschen, Robyn Shilland, David Little, Francis Murray  
**ASSESSMENT OF THE EFFECTIVENESS AND COST BENEFITS OF PROPHYLACTIC HEALTH PRODUCTS IN AQUACULTURE: A SYSTEMATIC REVIEW**

10:00  **Serge Corneillie**, Victor L. Nsereko, JC Filippi, Don R. McIntyre  
**INFLUENCE OF FEEDING A *Saccharomyces cerevisiae* FERMENTATION PRODUCT, YEAST FRAGMENTS, OR WHOLE YEAST CELLS ON THE IMMUNE STATUS, MICROBIOTA AND SURVIVAL RATE OF FISH AND SHRIMP**

10:20  **Barbara Rossi**, Maria Angéles Esteban, José María García-Beltrán, Alberto Cuesta, Benedetta Tugnoli, Andrea Piva, Ester Grilli  
**ANTIMICROBIAL POWER OF VARIOUS NATURE-IDENTICAL COMPOUNDS AGAINST *Vibrio* spp.**

10:40  **BREAK**

**ENDOGENOUS PROBIONTS IMPROVE SURVIVAL AND IMMUNITY IN BLACK TIGER SHRIMP *Penaeus monodon***

11:30  **Mahmoud Eltholth**, Radi Mohamed, Eman Moustafa, Ahmad Hamza, Foad Farrag, Olivier Decamp, Mahmoud Dawood, Mabrouk Elsabagh  
**ASSESSING THE IMPACT OF BACILLUS STRAINS MIXTURE PROBIOTIC ON WATER QUALITY, GROWTH PERFORMANCE, BLOOD PROFILE AND INTESTINAL MORPHOLOGY OF NILE TILAPIA *Oreochromis niloticus***
11:50 Mojgan Khodadadi, Ali Naseri, Mehran Javaheri Baboli
THE EFFECTS OF AQUALASE ON GROWTH OF *Mesopotamichthys sharpeyi*

12:10 Françoise Leroi
BIOPRESERVATION, A NATURAL PRESERVATION TECHNOLOGY USING SELECTED MICROORGANISMS TO GUARANTY SAFETY AND QUALITY OF SEAFOOD PRODUCTS

12:30 Rayaprolu Srinivas
EFFECT OF PROBIOTICS ON PATHOGENIC *Vibrio* BACTERIAL POPULATIONS IN CULTURE PONDS OF *Litopenaeus vannamei* AT NAUPADA, SRIKAKULAM DISTRICT, ANDHRA PRADESH, INDIA

**AQUACULTURE IN IRAN**
Wednesday, August 29  09:00 - 12:30  Tiberiade
Chair: Hossein Ali Abdolhay

09:00 Hassan Salehi, Hossein Abdolhay
FISHERIES AND AQUACULTURE IN ISLAMIC REPUBLIC OF IRAN

**MEASURING SUSTAINABILITY IN A CHANGING WORLD**
Wednesday, August 29  09:00 - 12:30  Antigone 3
Chair: Tonje Osmundsen

09:00 Rodrigue Yossa
CERTIFYING PROFESSIONAL AQUACULTURISTS TO COMPLEMENT FARM CERTIFICATION?

09:20 Vilde Steiro Amundsen, Tonje C. Osmundsen
VIRTUALLY THE REALITY: NEGOTIATING THE DISTANCE BETWEEN STANDARDS AND LOCAL REALITIES WHEN CERTIFYING SALMON AQUACULTURE

09:40 Tonje C. Osmundsen, Vilde S. Amundsen
PUTTING CERTIFICATION SCHEMES INTO WATER – EXPERIENCES FROM CERTIFIED FISH FARMERS

10:00 Emmanuelle Bourgois, Krishna R. Salin, Pau Badia Grimalt, Gabriel Arome Ataguba
COMPLIANCE WITH SUSTAINABLE STANDARDS: FOCUS ON SHRIMP FARMS IN THAILAND
10:20  Emmanuelle Bourgois, Pau Badia Grimalt, Flavie Denelle
AQUACULTURE STANDARDS AND CERTIFICATION: SOCIAL CERTIFICATION AND LABOR WELFARE

10:40  BREAK

11:10  Patricia Moraes-Valenti, Renato Almeida, Wagner C. Valenti
SUSTAINABILITY INDICATORS APPLIED IN TILAPIA’S Oreochromis niloticus CAGE FISHFARM IN A BRAZILIAN TROPICAL RESERVOIR

11:30  Emmanuelle Bourgois, Pau Badia Grimalt
AQUACULTURE STANDARD AND CERTIFICATION: MEASURING SUSTAINABILITY IN A CHANGING WORLD

11:50  Sarah Naughton, Alex Tahar, Siobhán Kavanagh, Owen Donohue, Andy Fogarty, Neil Rowan
DEVELOPMENT AND TESTING OF MOLECULAR-BASED METHODOLOGIES FOR REAL-TIME PROFILING OF BIOLOGICAL COMMUNITIES IN FRESHWATER AQUACULTURE

12:10  Michaela Fox, Heather Moore, Matt Service, Moira Dean, Katrina Campbell
AQUACULTURE SECURITY. AN EVALUATION OF THE SOCIAL AND ECONOMIC IMPACTS OF EMERGING THREATS (ALERT): A STAKEHOLDER PERSPECTIVE

**SEX DETERMINISM AND CONTROL**
Wednesday, August 29  09:00 - 15:40  Joffre 5
Chair: Jean-François Baroiller

09:00  Jean-François Baroiller, Helena D’Cotta
MALE MONOSEX PRODUCTION IN TILAPIAS: A REVIEW

09:40  Rokyatou Sissao, Helena D’Cotta, Florence W. Kagambega, Jean-François Baroiller, Aboubacar Toguyeni
PRODUCTION OF XY FEMALES AND YY MALES ASSISTED BY SEX CHROMOSOMIC MARKERS IN A NILE TILAPIA Oreochromis niloticus WILD POPULATION FROM BURKINA FASO

10:00  Boris Gomelsky, Noel Novelo, Shawn Coyle, Alexander Kramer, Jeffrey Warner
GROWTH RATE AND SEX SEGREGATION IN NILE TILAPIA CROSSES OBTAINED USING YY MALES AND NORMAL XX FEMALES OF DIFFERENT ORIGIN
10:20  Boris Gomelsky
SEX CONTROL IN COMMON CARP: THEORETICAL AND PRACTICAL ASPECTS

10:40  BREAK

11:10  Paulino Martínez, Diego Robledo, Xoana Taboada, Carmen Bouza, Antonio Gómez-Tato, Francesc Piferrer, Ana María Viñas
GENETIC ARCHITECTURE OF SEX DETERMINATION IN TURBOT Scophthalmus maximus

11:30  Sara Faggion, Marc Vandeputte, Béatrice Chatain, Pierre-Alexandre Gagnaire, François Allal
POPULATION-SPECIFIC VARIATIONS OF THE GENETIC ARCHITECTURE OF SEX DETERMINATION IN WILD EUROPEAN SEA BASS Dicentrarchus labrax L.

11:50  Alexandros Tsakogiannis, Tereza Manousaki, Jacques Lagnel, Nikos Papandroulakis, Constantinos C. Mylonas, Costas S. Tsigenopoulos
COMPARATIVE TRANSCRIPTOMICS USING RNA SEQUENCING TO IDENTIFY GENE EXPRESSION SEX-BIAS PATTERNS IN FIVE SPARIDS

12:10  Benjamin Geffroy, Marc Vandeputte, Marie-Odile Blanc, Frédéric Clota, Bastien Sadoul, François Ruelle, Béatrice Chatain, Xavier Cousin, Marie-Laure Bégout
SEX DETERMINATION OF THE EUROPEAN SEA BASS: DECIPHERING THE ROLE OF TEMPERATURE OVER THE WHOLE LARVAL PERIOD TO ENHANCE FEMALE PRODUCTION

12:30  LUNCH

14:00  Benjamin Geffroy, Agnès Bardonnet
THE ROLE OF DENSITY IN SEX DETERMINATION OF THE EUROPEAN EEL AND THE IDENTIFICATION OF EARLY SEX MARKERS

14:20  Saïdou Santi, Carole Rougeot, Aboubacar Toguyeni, Vincent Gennotte, Charles Mélard
EFFECT OF HIGH TEMPERATURE ON SEX DETERMINISM AND SEX DIFFERENTIATION PROCESS IN AFRICAN CATFISH Clarias gariepinus

14:40  Helena D’Cotta, Jean-François Baroiller
EPIGENETICS AND SEX CONTROL IN FISH FARMING

15:00  Amir Sagi
SEX DETERMINATION, SEX CONTROL AND MONOSEX CULTURE IN DECAPODS

15:20  Anne-Sophie Martinez
SEX DETERMINISM IN MOLLUSCS: FROM FUNDAMENTAL RESEARCH TO THE CONTROL OF SEX IN AQUACULTURE
ACTING TOGETHER TO BETTER PREVENT AND MITIGATE FARMED SHELLFISH DISEASES (VIVALDI)

Wednesday, August 29    09:00 - 17:20    Sully 1
Chair: Isabelle Arzul

08:45  Isabelle Arzul, Ifremer, FR
UNDERSTANDING AND ADDRESSING THE CURRENT THREATS TO EUROPE’S SHELLFISH INDUSTRY BY

09:15  Rob Christley, University of Liverpool, UK and Coralie Lupo, Ifremer, FR
RISK PERCEPTION ACROSS COUNTRIES AND PRACTICES: INTERACTIVE WORKSHOP BASED ON FOCUS GROUPS

10:00 BREAK AND POSTER SESSION

10:30 Session 1: Preventing the entry of diseases
Chair: Deborah Cheslett, Marine Institute, IE and Christophe Stavrakakis, Ifremer, FR
Brief presentation of the main results of the VIVALDI project
Panel:
Changming Bai, Chinese Academy of Fishery Sciences
PATHOGENESIS AND MOLECULAR EPIDEMIOLOGY OF OSTREID HERPESVIRUS 1 IN CHINA

Corinne Audemard, Virginia Institute of Marine Science, USA
ENSURING THE SAFETY OF SHELLFISH FOR HUMAN CONSUMPTION

Niall Gerlitz, DG for Health and Food Safety, European Commission
AN OVERVIEW OF MOLLUSC ANIMAL HEALTH CONTROLS IN THE EU

12:30 LUNCH
13:30  **Session 2: Establishing effective breeding and farming programs against mollusc diseases**  
Chair: Sylvie Lapègue (Ifremer, FR) and Luca Bargelloni (UNIPD, IT)  
Brief presentation of the main results of VIVALDI  
**Panel:**  
Florian Enez (SYSAAF, FR) and Lucie Genestout (LABOGENA, FR)  
Ross Huston (The Roslin Institute, UK)  
Noelia Carrasco Querol, IRTA, ES  
A production calendar based on water temperature, spat size and husbandry practices reduces herpesvirus impact on cultured Pacific oyster Crassostrea gigas, in the Ebro Delta

15:30  **BREAK AND POSTER SESSION**

16:00  **Session 3: Defining biosecurity measures**  
Chair: Dolors Furones (IRTA, ES) and Ed Peeler (CEFAS, UK)  
Brief presentation of the main results of VIVALDI  
**Panel:**  
Marion Richard, UMR MARBEC, FR  
Consequences of oyster mortality episodes on benthic-pelagic coupling of the Thau lagoon (FR)  
Achim Janke, Global Prospects / TOPS Oysters Consulting Ltd, New-Zealand  
Strategies to minimize risk of disease and to produce resilient quality oysters  
Camille Perche, Maison Gillardeau, FR  
The management of oyster mortalities

18:00  **Rob Christley**, University of Liverpool, UK and **Coralie Lupo**, Ifremer, FR  
Risk perception across countries and practices: debrief and synthesis

18:15  **CONCLUSIVE ADDRESS**
09:00  Uri Yogev, Amit Gross
NOVEL APPROACH FOR RECIRCULATING AQUACULTURE SYSTEMS (RAS), BASED ON MICROBIAL ASSIMILATION (BIOFLOC) SIDE-REACTOR: MODELING AND A PROOF OF CONCEPT

09:20  Aikaterini Spiliotopoulou, Henrik R. Andersen, Lars-Flemming Pedersen, Colin A. Stedmon, Adam C. Hambly
THE EFFECT OF OZONE ON FLUORESCENT ORGANIC MATTER IN FRESHWATER PILOT RECIRCULATING AQUACULTURE SYSTEMS

09:40  Kevin Torbin Stiller, Jelena Kolarevic, Carlo C. Lazado, Chris Good, Steven T. Summerfelt, Vasco C. Mota, Bendik F. Terjesen, Åsa M. O. Espmark
TOTAL RESIDUAL OXIDANTS IN ATLANTIC SALMON POST-SMOLT PERFORMANCE, HEALTH AND WELFARE IN BRACKISH WATER

10:00  Mingdong Ji, Songming Zhu, Jianping Li, Zhangying Ye
SUSPENDED SOLIDS REMOVAL EFFICIENCY OF DIFFERENT MESH SIZE OF MICROSCREENS FILTRATION WITH FOAM FRACTIONATION ON SEAWATER RECIRCULATING SYSTEM FOR GROUPER FARMING

10:20  Jaime Orellana, Uwe Waller, Bert Wecker
FOAM FRACTIONATION AND OZONE: INTERACTION BETWEEN SALINITY, REDOX POTENTIAL, AND TOTAL RESIDUAL OXIDANTS CONCENTRATION

10:40  BREAK

11:10  Sharada Navada, Gerhardus C. Verstege, Bendik Fyhn Terjesen, Øyvind Mikkelsen, Frédéric Gaumet, Vasco C. Mota, Andries Kamstra
BIOFILTER SALINITY CHANGE STRATEGIES FOR ATLANTIC SALMON Salmo salar L. POST-SMOLT PRODUCTION IN RECIRCULATING AQUACULTURE SYSTEMS

11:30  Desislava Bögner, Frederike Schmachtl, Björn Mayr, Lotte Pohl, Lara Hubal, Monja Daub, Gregor Jaehne, Mirko Bögner, Jörn Halfer, Kai Lorkowski, Matthew J. Slater
UP-SCALING OZONE TREATED SLUDGE AS CARBON SOURCE FOR DENITRIFICATION: FROM THE LAB TO RAS WORKING AT COMMERCIAL SCALE
11:50 Carlos Espinal, Zala Schmautz, Ranka Junge, Linda Tschirren, Rob van de Ven
DENITRIFYING ACTIVITY AND SETTLING PROPERTIES OF AQUACULTURE BIOSOLOIDS TREATED IN SINGLE SLUDGE REACTORS

12:10 Lisa Carolina Wenzel, Sebastian Marcus Strauch, Adrian Bischoff, Olaf Dellwig, Jan Klein, Andrea Schüch, Berit Wasenitz, Harry Wilhelm Palm
COMMERCIAL AFRICAN CATFISH Clarias gariepinus RECIRCULATING AQUACULTURE SYSTEMS: ASSESSMENT OF ELEMENT AND ENERGY PATHWAYS WITH SPECIAL FOCUS ON THE PHOSPHORUS CYCLE

12:30 Sebastian Marcus Strauch, Adrian Bischoff, Judith Bahr, Björn Bassmann, Michael Oster, Berit Wasenitz, Klaus Wimmers, Harry Wilhelm Palm
EFFECTS OF ORTHO-PHOSPHATE IN THE REARING WATER OF JUVENILE AFRICAN CATFISH Clarias gariepinus ON GROWTH PERFORMANCE, WELFARE AND PRODUCT QUALITY

12:50 LUNCH

14:00 Victor Dumas, Laurent Labbé, Pablo Pelissier
RAINBOW TROUT Oncorhynchus mykiss FRESHWATER RECIRCULATING AQUACULTURE SYSTEM: NUTRIENT FLOW MANAGEMENT WITH AQUAPONICS

14:20 Mirko Bögner, Clara Schwenke, Tammo Gürtzgen, Desislava Bögner, Matthew J. Slater
AMBIENT LIGHT INTENSITY INFLUENCES GROWTH PERFORMANCE AND DIURNAL STRESS RESPONSE OF JUVENILE STARRY FLOUNDER Platichthys stellatus IN RECIRCULATING AQUACULTURE SYSTEMS

14:40 Vincent Lugert, Kevin Hopkins, Carsten Schulz, Kristina Schlicht, Joachim Krieter
THE COURSE OF GROWTH, FEED INTAKE AND FEED EFFICIENCY OF DIFFERENT TURBOT Scophthalmus maximus STRAINS IN RAS

15:00 Ercument Genc, Dogukan Kaya, Derya Guroy, Abdolsaleh Qaranjiki, M. Ayce Genc
EFFECTS OF DIFFERENT DIETARY OLIGOSACCHARIDES ON GROWTH OF Clarias gariepinus IN RECIRCULATED AQUACULTURE SYSTEM: TWO YEARS RESULTS

15:20 Jonni Virtanen
SUPER INTENSIVE RAS TEST WITH CATFISH Clarias anguillaris

15:40 BREAK
16:00 **Kyra Hoevenaars**, Julian Mamo, Ephraim Gukelberger, Paw Petersen, Susan Claire Adhiambo, Robert Kinyua, Jan Hoinkis
*INTERGRATED AQUACULTURE BASED ON SUSTAINABLE WATER RECIRCULATING SYSTEM FOR THE VICTORIA LAKE BASIN (VICINAQUA)*

16:20 **Fengdeng Zhang**, Songming Zhu, Peiqi Zhang, Zhangying Ye
*EXPERIMENTAL STUDY ON FEEDING ACCURACY OF THE PROJECTION TYPE OF QUANTITATIVE FEEDING MACHINE IN RAS*

16:40 **Pakamas Sreejariya**
*FISH CULTURE INTEGRATED WITH VEGETABLE IN WATER RECIRCULATING SYSTEM IN URBAN AREA*

17:00 **Robert Bishop**
*MARINE ENVIRONMENTAL RECIRCULATION AQUACULTURE PRODUCTION SYSTEM FOR HIGH VALUE SPECIES IN BOTH 1ST AND 3RD WORLD COUNTIES*

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**CAGE CULTURE**

Wednesday, August 29  11:10 - 12:30  Antigone 1
Chair: Hans Bjelland

11:10 **Nina Bloecher**, Oliver Floerl, Torfinn Solvang
*ASSESSMENT OF NOVEL ANTIFOULING COATINGS FOR SALMON FARMING*

11:30 **Zsolt Volent**, Birger Venås, Jens Birkevold, Leif Magne Sunde
*VARIATION OF DISSOLVED OXYGEN (DO) IN FISH CAGES WITH SHIELDING SKIRT FOR PREVENTION OF SALMON LICE *Lepeophtheirus salmonis*

11:50 **Martin Føre**, Eirik Svendsen, Kevin Frank, Nina Bloecher, Leif Magne Sunde
*DEVLOPING PRECISION FISH FARMING: UNVEILING LINKS BETWEEN OBSERVABLE BEHAVIOUR AND PHYSIOLOGICAL STATES IN FARMED FISH*

12:10 **Eleni Kelasidi**, Walter Caharija, Esten Ingar Grøtli, Martin Føre, Leif Magne Sunde
*DESIGN OF AUTONOMOUS ROBOTS FOR SEA BASED AQUACULTURE USING THE SEATONOMY METHOD*
NATIONAL AQUACULTURE POLICIES AND REGULATIONS
Wednesday, August 29    11:10 - 12:30    Sully 3
Chair: Giovanna Marino

11:10 Rodrigue Yossa, Johan Verreth
WORLDFISH RESEARCH IN FISH FEEDS AND NUTRITION

11:30 Trevor C. Telfer
TOOLS, MODELS AND DECISION SUPPORT SYSTEMS FOR POLICY AND
GOVERNANCE: THE ‘TAPAS’ PROJECT

11:50 Bertrand Jacquemin, Michèle Barbier, Bénédicte Charrier, Rita Araujo,
Susan Holdt, Céline Rebours
PEGASUS – PHYCOMORPH EUROPEAN GUIDELINES FOR SUSTAINABLE
AQUACULTURE OF SEAWEEDS

12:10 Malcolm Dickson, Naseem Aleem, Shahrear Kabir
USING MARKET SYSTEMS APPROACHES TO LEVERAGE PRIVATE SECTOR
AQUACULTURE INVESTMENT IN BANGLADESH

12:30 Qingyin Wang
GREEN DEVELOPMENT – A RATIONAL APPROACH TO SUSTAINABLE
AQUACULTURE

RESEARCH PRIORITIES IN SUPPORT OF
COMMERCIAL AQUACULTURE:
A GLOBAL OVERVIEW
Wednesday, August 29    09:00 - 17:20    Sully 2
Chair: Matt Slater

09:00 Ragnar Tveterås
WHAT KEY ECONOMIC DRIVERS OR SHOCKS ARE LIKELIEST TO AFFECT
FUTURE GROWTH OF AQUACULTURE WORLDWIDE?

09:20 Doris Soto, Lindsay Ross, Pedro Bueno, Lionel Dabbadie, Malcolm Beveridge,
Jose Aguilar-Manjarrez, Neil Handisyde
RESEARCH NEEDS TO ADDRESS AQUACULTURE VULNERABILITY UNDER
CLIMATE CHANGE

09:40 Bela Buck
OFFSHORE AQUACULTURE ADVANCES AND FUTURE RESEARCH NEEDS
10:00 Denis Covès, Lionel Dabbadie, François Herman, Fabrice Teletchea, Jean-Claude Falguière
RESEARCH PRIORITIES FOR A SUSTAINABLE MARINE FINFISH FARMING DEVELOPMENT IN SMALL ISLANDS TERRITORIES

10:20 Simon Bush
QUALITY CERTIFICATION AND GOVERNANCE OF AQUACULTURE IN GLOBAL SOUTH

10:40 BREAK

11:10 Aad Smaal
BIVALVE AQUACULTURE, GLOBAL CHALLENGES

11:30 Wagner Valenti
ADVANCES AND FUTURE NEEDS FOR INTEGRATED AQUACULTURE SYSTEM DEVELOPMENT

11:50 Yoram Avnimelech
RESEARCH PRIORITIES IN BIOFLOC TECHNOLOGY: SINGLE SPECIES OR MIXED MICROBIAL COMMUNITY

12:10 Iddya Karunasagar
RESEARCH PRIORITIES TO REDUCE LOSSES TO DISEASE IN AQUACULTURE

12:30 LUNCH

14:00 Patrick Sorgeloos
NEED FOR MORE RESEARCH IN MICROBIAL MANAGEMENT TO MAKE INTENSIVE AQUACULTURE MORE SUSTAINABLE

14:20 Mathilde Dupont-Nivet
GENETICS AND AQUAFEEDS: CURRENT AND FUTURE RESEARCH NEED

14:40 Caird Rexroad
REVIEW OF ADVANCES IN GENETICS AND BREEDING OF MAJOR U.S. AQUACULTURE SPECIES AND FUTURE NEEDS

15:00 Michael Schwarz, Jerome Bosmans, Chad Clayton, Stephen Urick
LARVAL FEEDS FOR HIGH-VALUE FOODFISH AND ORNAMENTAL/CONSERVATION AQUACULTURE: RESEARCH NEEDS TO INCREASE LIVE FEEDS QUALITY, SAFETY, BIOSECURITY, AND OPTIMIZATION OF LARVAL PRODUCTION PROTOCOLS
15:20  Bente E. Torstensen
RESEARCH PRIORITIES TO SUPPORT SUSTAINABLE DEVELOPMENT OF
ATLANTIC SALMON AQUACULTURE IN NORWAY

15:40  BREAK

16:00  David Little, John Bostock, Stuart Bunting, William Leschen,
Mahmoud Eltholth, Richard Newton, Francis Murray
RESEARCH NEEDS IN SUPPORT OF GROWTH OF SMALL-SCALE
AQUACULTURE GLOBALLY

16:20  Fabrice Teletchea, Andrew Rhyne, Michael Tlusty
AQUARIUM FISH AQUACULTURE: OVERVIEW AND EMERGING QUESTIONS

ASSESSMENT AND MITIGATION OF ENVIRONMENTAL IMPACT
  Wednesday, August 29  11:30 - 17:20  Barthez
  Chair: Thomas Guyondet

11:30  Diana Edithe Andria-Mananjara, Modestine Raliniaina, Philippe Martel,
Rija Andriamarolaza, Ezra Andoniaina Raminoharisoa, Lionel Dabbadie,
Jean-Michel Mortillaro
CHARACTERIZATION OF CONTAMINATION LEVELS AND SOURCES IN
FRESHWATER FISH FROM ANTANANARIVO, MADAGASCAR

11:50  Charles Vanhuysse, Melanie Lepoittevin, Christiane Rakotomalala,
Clarisse Mallet, Christophe Lelong, Fabrice Pernet, Francis Orvain
IS THE BENTHIC HABITAT OF OYSTER TABLES THE IDEAL SHELTER FOR THE
PATHOGENIC AGENT OsHV-1 μvar PERSISTENCE: AN ENVIRONNMENTAL
STUDY

12:10  Arnaldo Marín, Claudia Marín, Nuria García-Bueno
BIOFILM AS TOOL TO EVALUATE ORGANIC AND CHEMICAL DISPERSION
FROM MARINE FISH FARMS

12:30  LUNCH

14:00  Stephen Cross, Allison Byrne
THE STRUCTURE AND FUNCTION OF “THE SALMON FARM REEF” – IT’S NOT
SIMPLY BIOFOULING
14:20 Romain Pete, Marion Richard, Béatrice Bec, Valérie Derolez, Franck Lagarde, Thomas Guyondet, Stéphane Pouvreau, Annie Fiandrino
THE TROPHIC CARRYING CAPACITY OF THE THAU LAGOON: DEALING WITH HUMAN ACTIVITIES AND ECOLOGICAL CONSERVATION

14:40 Clémence Cordier, Christophe Stavrakakis, Béatrice Dupuy, Mathias Papin, Patrick Sauvade, Franz Coelho, Philippe Moulin
ULTRAFILTRATION: A SOLUTION FOR SHELLFISH AQUACULTURE

15:00 Daniele Brigolin, Andrea Alberto Forchino, Vincent Gennotte, Charles Mélard, Roberto Pastres
APPLICATION OF THE LIFE CYCLE APPROACH TO THE SET-UP OF A PILOT AQUAPONIC FACILITY IN BELGIUM

15:20 Christophe Jaeger, Pierre Foucard, Aurélien Tocqueville, Sarah Nahon, Joël Aubin
ENVIRONMENTAL ASSESSMENT OF AQUAPONICS: THE LETTUCE POINT OF VIEW

15:40 BREAK

16:00 Pierre-Alexandre Willot, Joël Aubin, Aurélie Wilfart
VALUATING POTENTIAL ECOSYSTEM SERVICES OF A FRENCH POND FARM WITH A LIFE-CYCLE ORIENTED METHODOLOGY

16:20 Sinem Zeytin, Gretchen Wagner, Gunnar Gerdts, Matthew James Slater
TRANSLOCATION OF MICROPLASTIC IN SEA BASS *Dicentrarchus labrax* FILET

16:40 Carlos A. P. Andrade, Natacha Nogueira, Pedro Diniz, Silvestre França
MONITORING THE EFFECT OF SEA PLASTICS IN MADEIRA ISLAND OFFSHORE FISH FARMS: IS THE THREAT REAL?

17:00 Alessio Gomiero, Kjell Birger Øysæd, Leon Moodley, Elisa Ravagnan, Thorleifur Ágústsson, Luca Bolognini, Fabio Grati
FIRST RECORD OF LEVELS AND DISTRIBUTION OF MICROPLASTICS IN COASTAL SEDIMENTS COLLECTED NEAR AN AQUACULTURE SITE IN THE SOUTHWEST OF NORWAY
AQUARIOLOGY – ROLE OF PUBLIC AQUARIA  
Wednesday, August 29  14:00 - 17:20  Tiberiade  
Chair: Nicolas Hirel

DEVELOPMENT, WELFARE AND POVERTY ALLEVIATION  
Wednesday, August 29  14:00 - 15:40  Antigone 3  
Chair: Mark Flaherty

14:00  Marc Oswald, Henri-Joël Niamien K., Mohamed Diaby B., Moïse Théa C., Thimothé Niamien Y., Barbara Bentz, Olivier Mikolasek, Celestin Blé M., Joseph Kaudhis K., Sidiki Keita  
TWENTY YEARS AFTER ITS EMERGENCE, WHAT HAS HAPPENED TO FISHPFARMING DIVERSIFICATION IN FRENCH WEST-AFRICA (THE EXAMPLE OF COTE D’IVOIRE AND GUINEA)

14:20  Mark Flaherty, Sean Irwin  
EXPLORING THE RELATIONSHIP BETWEEN NEW AQUACULTURE SYSTEMS AND FOOD SECURITY: INSIGHTS FROM THE BOLIVIAN AMAZON

14:40  Friday G. Ogbe  
AN ASSESSMENT OF CONSTRAINTS TO AQUACULTURE PRODUCTION IN CENTRAL NIGERIA

STURGEON  
Wednesday, August 29  14:00 - 17:20  Rondelet  
Chair: Harald Rosenthal

14:00  Harald Rosenthal  
OUTCOME OF THE 8TH INTERNATIONAL SYMPOSIUM ON STURGEONS (ISS 8) AND THE “VIENNA 2018 DECLARATION ON GLOBAL STURGEON CONSERVATION”

14:20  Paolo Bronzi, Harald Rosenthal  
STATUS UPDATE ON GLOBAL STURGEON AND CAVIAR PRODUCTIONS TO THE END OF 2016

14:40  Harald Rosenthal  
EXPANDING THE KNOWLEDGE BASE ON “CULTURE REQUIREMENTS TO PRODUCE STRONG JUVENILES FOR RELEASE”: THE NEED TO TRAIN FISH FOR FITNESS OF SURVIVAL IN A HARSH ENVIRONMENT
MARINE AND FRESHWATER CRUSTACEAN CULTURE
Wednesday, August 29  14:00 - 17:20  Sully 3
Chair: Michael New, Michael Schwarz, William Daniels

14:00  Darryl Jory, James Anderson
THE GLOBAL SHRIMP FARMING INDUSTRY: STATUS, CHALLENGES AND
PERSPECTIVES

14:20  Ana Nobre, Renata Serradeiro, Luisa M.P. Valente, Ingrid Lupatsch
EVALUATION OF THE BIOENERGETIC AND PROTEIN FLUX MODEL FOR
GROWTH SIMULATION OF THE PACIFIC WHITE SHRIMP Litopenaeus
vannamei
14:40  **Ricardo Perez-Enriquez**, Raúl Llera-Herrera, Diego Robledo, Ross Houston  
SNP MARKERS FOR THE GENETIC CHARACTERIZATION OF MEXICAN SHRIMP BROODSTOCKS

15:00  **Eliahu D. Aflalo**, V.S.N. Dandu Raju, Naidu A. Bommi, Ofer Ovadia, Amir Sagi  
TWO-GENERATION SELECTIVE BREEDING PROGRAM FOR PRAWN GENDER SPECIFIC GROWTH

15:20  **Pablo Jiménez-Prada**, Salvador Jerez, José Antonio Pérez,  
Covadonga Rodríguez, Ismael Hachero-Cruzado, José Manuel Guerra-García  
EFFECT OF LYOPHILIZATE *Gammarus insensibilis* (CRUSTACEA:AMPHIPODA) IN GROWTH, CHEMICAL COMPOSITION AND SURVIVAL OF *Seriola dumerili*

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**PARASITES**  
Wednesday, August 29  
14:00 - 17:20  
Louisville  
Chair: Annemie Decostere

14:00  **Diego Robledo**, Alejandro P. Gutierrez, Agustin Barria, Jose M. Yanez,  
Ross D. Houston  
GENOMIC APPROACHES TO UNDERSTANDING AND IMPROVING RESISTANCE TO SEA LICE IN ATLANTIC SALMON

14:20  **Bengt Finstad**, Ingrid Solberg, Kevin Frank, Crawford Revie, Jaewoon Jeong,  
Ola Diserud, Rolf Sivertsgård, Ingebritg Uglem, Ane V. Nytrø,  
Johan H.H. Berntsen, Leif Magne Sunde, Trine Thorvaldsen, Torfinn Solvang,  
Kari Olli Helgesen, Anja Bråthen Kristoffersen  
KNOWLEDGE FOR INCREASED PRECISION IN SEA LICE COUNTING ON FISH FARMS AND ESTIMATION OF OCCURRENCE

14:40  **Lydie Canier**, Christine Dubreuil, Mathilde Noyer, Delphine Serpin,  
Yann Couraleau, Bruno Chollet, Céline Garcia, Isabelle Arzul  
DEVELOPEMENT OF A NEW MULTIPLEX PCR ASSAY FOR THE CONCOMITENT DETECTION OF ENDEMIC LISTED PATHOGENS OF FLAT OYSTERS: *Martelia refringens* AND *Bonamia* sp.

15:00  **Amit Savaya-Alkalay**, Hanoch Glassner, Rakefet Chishinski, Ndeye Diane,  
Eliahu D. Aflalo, Amir Sagi  
MONOSEX PRAWNS AS SUSTAINABLE BIOCONTROL AGENTS OVER DISEASE CARRYING SNAILS IN AQUACULTURE

15:20  **Erhowose Emmanuel Omowohwowie**, A.O. Adeyemo, L. Fineroad,  
S.O. Egwono, O. Preye, C.O. Blessing  
PARASITES OF *Oreochromis niloticus* OBSERVED IN THE FISHERIES UNIT OF THE NIGER DELTA UNIVERSITY TEACHING AND RESEARCH FARM
15:40 Francisco Esteban Montero, Javier Rodríguez-Llanos, José Francisco Palacios-Abella
PARASITE PATHOGENS OF THE ATLANTIC BLUEFIN TUNA Thunnus thynnus IN THE MEDITERRANEAN SEA

OCEAN AQUACULTURE
Wednesday, August 29 14:00 - 17:20  Antigone 1
Chair: Hans Bjelland

14:00 Michael Rubino, Michael Rust
SCIENCE TO INFORM THE DEVELOPMENT AND REGULATION OF OFFSHORE AQUACULTURE

14:20 Bela H. Buck
ENABLING OFFSHORE AQUACULTURE – TRANSLATING POTENTIAL TO PRODUCTION

14:40 Hans Bjelland, Leif Magne Sunde, Martin Føre
KEY CHALLENGES TO SALMON FARMING AT EXPOSED SITES IN NORWAY

15:00 Heðin Abrahamsen
PLANNING WAVE AND CURRENT MEASUREMENTS AT AQUACULTURE SITES IN EXPOSED AREAS

15:20 Finn Are Michelsen, Pascal Klebert, Ole Jacob Broch, Morten Alver
THE EFFECTS OF FISH FARM STRUCTURES ON NEAR-FIELD WATER CURRENTS: A CASE STUDY FROM FRØYA, CENTRAL NORWAY

15:40 BREAK

16:00 Laurent Barillé, Pierre Gernez, Yoann Thomas, Stéphane Simis, Glize Philippe, Anthony LeBrís, Frank Kane, Lynne Falconner, Philippe Goulletquer, Patrice Guillotreau, Brice Trouillet, Stéphanie Palmer
OFF-SHORE CULTIVATION FOR SMALL OYSTER-FARMING COMPANIES IN FRANCE: POTENTIAL AND CONSTRAINTS

16:20 Kevin Heasman, Nicholas Scott, Bela H. Buck, Nils Goseberg, Arndt Hildebrandt, Arne Fredheim, Peter Vitasovich, Andrew Elliot, Zane Charman, Jannis Landmann, Ross Vennell, Malcolm Smeaton, Keith Alexander, Sam Godsiff
EXTENDING SHELLFISH CULTURE INTO OPEN OCEAN EXPOSED SITES IN NEW ZEALAND
16:40  Paul Olin, Everard Ashworth
THE VENTURA SHELLFISH ENTERPRISE: OPPORTUNITIES FOR MUSSEL
FARMING IN SOUTHERN CALIFORNIA

17:00  Carly Daniels, Charlie Ellis, Peter Miller
NOVEL SHELLFISH AQUACULTURE: EUROPEAN LOBSTER –
ENVIRONMENTAL MONITORING TO INFORM REARING SUCCESS

NUTRITIONAL REQUIREMENTS – FINFISH/CRUSTACEANS
Wednesday, August 29   14:00 - 17:20   Pasteur Auditorium
Chair: Marisol Izquierdo

14:00  Brett D. Glencross
MODELLING THE APPLICATION OF THE IDEAL PROTEIN CONCEPT IN
SHRIMP

14:20  Gabriela Gaxiola, Gerard Cuzon, Alfonso Alvarez, Martin Arenas,
Bartolo Concha, Irazio Lémus, Juan Carlos Maldonado
NUTRITION OF ROBALO Centropomus undecimalis JUVENILES

14:40  Gerd Marit Berge, Elisabeth Ytteborg, Henrik Sundh, Tone-Kari Østbye,
Lene Sveen, Kristina Sundell, Aleksei Krasnov, Bente Ruyter
OMEGA-3 FATTY ACIDS AND ZINC AFFECT ROBUSTNESS AND FUNCTION OF
BARRIER TISSUES IN ATLANTIC SALMON Salmo salar

15:00  Pauline Wischhusen, Maroussia Parailloux, Mickael Briens,
Pierre-André Geraert, Antony Jesu Prabhu, Sadasivam J. Kaushik,
Benoit Fauconneau, Stéphanie Fontagné-Dicharry
EFFECT OF ORGANIC AND INORGANIC DIETARY SELENIUM
SUPPLEMENTATION IN RAINBOW TROUT Oncorhynchus mykiss
BROODSTOCK ON THE OXIDATIVE STATUS IN PROGENY

15:20  Jan Giebichenstein, Julia Gossa, Bjarne Scholz, Carsten Schulz,
Bernd Ueberschär
SEEKING THE OPTIMAL DOSE OF MICRO NUTRIENTS IN ARTIFICIAL DIETS
FOR MARINE FISH LARVAE

15:40  BREAK
16:00  **Neda Gilannejad, Gonzalo Martínez-Rodríguez, Manuel Yúfera**  
FEEDING PROTOCOL MODULATES THE DAILY GASTROINTESTINAL TRANSIT IN GILTHEAD SEABREAM JUVENILES

16:20  **Gabriela Gaxiola, Adriana Da Silva, Ana Castillo, Gerard Cuzon, Juna Carlos Maldonado, Alfonso Alvarez**  
SOME ASPECTS OF NUTRITIONAL PHYSIOLOGY OF WILD JUVENILES  
*Epinephelus morio*

16:40  **I. Patrick Saoud, Mohammad Abiad, Nivin Nasser**  
REPLACING SOYBEAN MEAL WITH RESTAURANT FOOD WASTE IN TILAPIA FEEDS IMPROVES PRODUCTION

17:00  **I. Patrick Saoud, Mohammad Abiad, Nivin Nasser**  
SUPPLEMENTING COMMERCIAL FEED WITH RESTAURANT PLATE-FOOD WASTE IN TILAPIA AQUACULTURE