

aquaculture europe 21



TUESDAY, October 5

PLENARY 1 AND STUDENT SPOTLIGHT

Tuesday, October 5 09.00 - 10.00 Auditorium

Chairs: Maria Teresa Dinis, Sachi Kausik

09.00 Shakuntala Thilsted

DIVERSIFICATION OF AQUATIC FOOD SYSTEMS: OCEANS OF OPPORTUNITY FOR NOURISHING NATIONS

09:40 STUDENT SPOTLIGHT

Dean Porter, Rebecca Heavyside, David Peggs, Charles McGurk, Sam Martin

GALT LEUCOCYTES AS A HEALTH SCREEN FOR FUNCTIONAL FEEDS IN RAINBOW TROUT *Oncorhynchus mykiss*

Sandra Ramos-Júdez, Ignacio Giménez, Josep Gumbau-Pous, Lucas Stephen Arnold-Cruañes, Alicia Estévez, François Chauvigné, Joan Cerdà, Neil Duncan

IMPLEMENTATION OF RECOMBINANT GONADOTROPIN THERAPIES TO CONTROL MATURATION FROM EARLY GAMETOGENESIS THROUGH TO SPAWNING OF COMMERCIALY VALID NUMBERS OF VIABLE LARVAE OF FLATHEAD GREY MULLET *Mugil cephalus*

Rafaela A. Santos, Nuno Mariz-Ponte, Nicole Martins, Russell Jerusik, Maria J. Saavedra, Aires Oliva-Teles, Helena Peres, António P. Carvalho, Conceição Santos, Cláudia R. Serra

QUORUM-QUENCHING *Bacillus* spp. PROTECT FISH FROM *Edwardsiella tarda* INFECTION AND MODULATE THE IMMUNE SYSTEM OF GILTHEAD SEABREAM *Sparus aurata*

10:00 BREAK

CLIMATE CHANGE AND AQUACULTURE

Tuesday, October 5 10.30 - 12.50 Berlim-Hotel

Chairs: Elisabeth Ytteborg, Miguel Gaspar, Sebastian Nikitas Politis

- 10.30 Orestis Stavrakidis-Zachou**, Nikos Papandroulakis, Pavlidis Michail, Konstadia Lika
DYNAMIC ENERGY BUDGET MODELS FOR STUDYING THE THERMAL TOLERANCE OF EUROPEAN SEA BASS
Dicentrarchus labrax AND MEAGRE *Argyrosomus regius*
- 10.50 Md Jakiul Islam**, Andreas Kunzmann, Matthew James Slater
NUTRITIONAL MITIGATION OF EXTREME HEATWAVE EXERTED STRESS IN FISH: THE CASE OF EUROPEAN SEABASS *Dicentrarchus labrax*
- 11.10 Lydia Katsika**, Ioannis Papadakis, Panagiota Tsoukali, Stavros Chatzifotis
EFFECT OF DIFFERENT DISSOLVED OXYGEN CONCENTRATIONS ON DIGESTIBILITY AND GASTRIC EVACUATION RATES OF EUROPEAN SEA BASS *Dicentrarchus labrax* AND GILTHEAD SEA BREAM *Sparus aurata*
- 11.30 Henri Lagarde**, Martin Prchal, Simon Pouil, Lionel Goardon, Marjorie Bideau, François Guyvarc'h, Laurent Labbé, Nicolas Dechamp, Florence Phocas, Mathilde Dupont-Nivet, Delphine Lallias
RELATIONSHIP BETWEEN EARLY OR LATE RESISTANCE TO ACUTE TEMPERATURE OR HYPOXIA STRESSES IN SIX RAINBOW TROUT ISOGENIC LINES
- 11.50 Luca Peruzza**, Federico Bonsembiante, Mattia Panin, Federica Poli, Morgan Smits, Alice Manuzzi, Giulia Dalla Rovere, Massimiliano Babbucci, Massimo Milan, Maria Elena Gelain, Luca Bargelloni
MARINE HEATWAVES SIGNIFICANTLY IMPAIR THE PERFORMANCES OF MANILA CLAM *Ruditapes philippinarum* AT MULTIPLE PHYSIOLOGICAL LEVELS
- 12.10 Zdenek Adámek**, Jana Konecná, Petr Karásek, Lucie Všeticková, Jana Podhrázká, Antonín Zajíček
THE RESPONSE OF MACROINVERTEBRATE ASSEMBLAGE ON LONG-TERM EXTREME FLOW RATE FLUCTUATIONS IN A CARP POND INFLOW CANAL
- 12.30 Meredith Burke**, Jon Grant, Ramon Filgueira, Ted Weire
OXYGENATION EFFECTS ON TEMPERATURE AND DISSOLVED OXYGEN AT A COMMERCIAL ATLANTIC SALMON *Salmo salar* FARM

NUTRITION: REQUIREMENTS

Tuesday, October 5 10.30 - 12.50 Congress Hall

Chairs: Helena Peres, Antony Jesu Prabhu

- 10.30 Gauthier D.P. Konnert**, Walter J.J. Gerrits, Sander W.S. Gussekloo, Karthik Masagounder, Julia Mas-Muñoz, Johan W. Schrama
THERE IS NO SINGLE OPTIMAL PROTEIN-TO-ENERGY RATIO FOR NILE TILAPIA *Oreochromis niloticus* FEEDS
- 10.50 Karthik Masagounder**, Tran Thi Thanh Hien, Le Quoc Viet, Tran Le Cam Tu, Tran Thi Tuyet Hoa, Nguyen Van Tien, Chuong Ngo Tien, Pham Minh Duc
RESPONSE OF WHITELEG SHRIMP TO DIETARY PROTEIN LEVELS BALANCED FOR AMINO ACIDS USING SUPPLEMENTAL SOURCES
- 11.10 Yiyen Tseng**, D. Domínguez, U Sivagurunathan, K.M. Eryalçin, C.M Hernández-Cruz, P. Antony Jesu Prabhu, P. Eckhard Witten, M. Izquierdo
EFFECTS OF DIETARY SUPPLEMENTATION OF COPPER ON GROWTH, SURVIVAL, ANTIOXIDANT STATUS AND BONE DEVELOPMENT IN GILTHEAD SEABREAM *Sparus aurata* LARVAE

- 11.30 Sivagurunathan Ulaganathan**, Yiyen Tseng, David Dominguez, Lidia Robaina, Clara Boglione, Marisol Izquierdo
POTENTIAL INTERACTION BETWEEN VITAMIN D AND VITAMIN K IN RELATION TO GROWTH, CALCIUM METABOLISM AND BONE MAINTENANCE IN GILTHEAD SEABREAM JUVENILE *Sparus aurata*
- 11.50 Rui Magalhães**, Nicole Martins, Filipa Fontinha, Ana Couto, Claudia Reis Serra, Rolf Erick Olsen, Helena Peres, Aires Oliva-Teles
DIETARY ARA/DHA RATIOS AND CARBOHYDRATE LEVEL EFFECTS ON GILTHEAD SEA BREAM LIVER AND INTESTINE WELFARE AND GUT MICROBIOTA
- 12.10 Jerry Maria Sojan**, Manu Kumar Gundappa, Francesca Maradonna, Oliana Carnevali
SYNERGISTIC ACTION OF BORON WITH VITAMIN D3 ON THE EARLY-STAGE SKELETAL DEVELOPMENT IN ZEBRAFISH LARVAE
- 12.30 Tomé S. Silva**, Antti Kause, Filipe Soares, Ana Nobre, Jorge Dias, Luís E.C. Conceição
DEFINING NUTRITIONAL REQUIREMENTS OF RAINBOW TROUT FOR THE FUTURE BY REVISITING THE PAST

PRECISION FARMING, MODELING AND ARTIFICIAL INTELLIGENCE

Tuesday, October 5 10.30 - 1730 Sidney-Hotel

Chairs: Martin Fore, Fearghal O Donncha

- 10.30 Franck Le Gall**, Joseph DePrisco, Steven G. Prescott, S. Budaev, Lars Ebbesson, Ivar Rønnestad, Ahmed Abid, Benoit Orihuela
USING DIGITAL TWIN FOR DECISION SUPPORT IN RAS FEEDING PROCESSES
- 10.50 Stepan Papacek**, Karel Petera
DOES THE SCALE OF RAS MATTER? COMPUTATIONAL FLUID DYNAMICS STUDY OF LARVAE PERFORMANCE IN RECIRCULATING AQUACULTURE SYSTEMS
- 11.10 Edouard Royer**, Damiano Pasetto, Roberto Pastres
DATA ASSIMILATION APPROACH TO SUPPORT DAY-TO-DAY DECISION PROCESS: FORECASTING FISH WEIGHT DISTRIBUTION IN A LAND-BASED RAINBOW TROUT *Oncorhynchus mykiss* FARM
- 11.30 Fearghal O'Donncha**, Caitlin L. Stockwell, Sonia Rey Planellas, Giulia Micallef, Paulito Palmes, Chris Webb, Ramon Filgueira, Jon Grant
DATA DRIVEN INSIGHT INTO FISH BEHAVIOUR AND THEIR USE FOR PRECISION AQUACULTURE
- 11.50 Joao G. Ferreira**, Rui Gomes Ferreira, Joao Lencart e Silva, Heather Moore, Matthew Service, Fearghal O'Donncha, Roberto Pastres, Giulia Micallef, John D. Icely
AQUASENSE – A REAL-TIME PRECISION AQUACULTURE PLATFORM FOR INDUSTRY
- 12.10 Sveinung Johan Ohrem**, Biao Su, Per Christian Endresen, Andrei Tsarau, Jan Tore Fagertun, Pascal Klebert
DIGITAL TWINS OF FISH FARMS – RECENT DEVELOPMENTS IN MODELING AND SENSOR DATA INTEGRATION
- 12.30 Adriano C. Lima**, Edouard Royer, Matteo Bolzonella, Roberto Pastres
DIGITAL TWIN PROTOTYPES IN FLOW-THROUGH SYSTEMS FOR FINFISH
- 12.50 LUNCH**

- 14.30 Oleksandr Movchan**, Petr Cisar, Dinara Bekkozhayeva
DEEP LEARNING FISH IN TANK BEHAVIOR MONITORING
- 14.50 Tamás Bardócz**, Dannie O'Brien, Steven G. Prescott, Freya Robinson, Joseph De Prisco, Yang Wang, Rhan Zhao, Wensheng Li
INNOVATIVE TECHNOLOGIES FOR REAL-TIME MONITORING AND HIGH-PRECISION DETECTION OF WATER QUALITY IN RECIRCULATING AQUACULTURE SYSTEMS – AQUADETECTOR PROJECT
- 15.10 Jan Urban**, Oleksandr Mashchenko, Pavla Urbanova
METHOD AND APPLICATION OF PARAMETERIZATION FOR FISH SKIN COLOUR EXPERIMENTS
- 15.30 Dinara Bekkozhayeva**
IMAGE BASED AUTOMATIC INDIVIDUAL IDENTIFICATION OF FISH WITHOUT OBVIOUS PATTERN ON A BODY (SCALE PATTERN)
- 15.50 Steven Prescott**, Joseph De Prisco, Ivar Rønnestad, Sergey Budaev, Joseph De Prisco, Ivar Rønnestad, Natalie Panasiak, Charlotte Dupont, Dimitri Trotignon, Dominique Durand, Lars Ebbesson, Franck Le Gall, Tamás Bardócz
IMPROVING RAINBOW TROUT *Oncorhynchus mykiss* FEEDING EFFICIENCY USING ARTIFICIAL INTELLIGENCE: VIDEO OBSERVATION OF BEHAVIOUR AND X-RAY IMAGING OF STOMACH FULLNESS TO SUPPORT A MODEL SIMULATION OF FISH FEEDING (FISHMET)
- 16.10 Petr Cisar**, Dinara Bekkozhayeva, Oleksandr Movchan
FISH INDIVIDUAL IDENTIFICATION – CAN WE SUBSTITUTE INVASIVE TAGGING?
- 16.30 Tobias Haug**, Dominik Ewald, S.S.W. Ende, J.V. Apel, J. Orellana, V. Edling, R. Thiele, M.S. Ur-Rehman, B. Wecker, K. Landsch, M.J. Slater, J. Henjes
ARTIFICIAL INTELLIGENCE IN AQUACULTURE: APPLYING IMAGING ANALYSIS AND ACOUSTICS

REPRODUCTION AND BROODSTOCK MANAGEMENT

Tuesday, October 5 10.30 - 17.30 Congress Auditorium

Chairs: Neil Duncan, Elsa Cabrita

- 10.30 Sandra Ramos-Júdez**, Ignacio Giménez, Josep Gumbau-Pous, Lucas Stephen Arnold-Cruañes, Alicia Estévez, François Chauvigné, Joan Cerdà, Neil Duncan
IMPLEMENTATION OF RECOMBINANT GONADOTROPIN THERAPIES TO CONTROL MATURATION FROM EARLY GAMETOGENESIS THROUGH TO SPAWNING OF COMMERCIALY VALID NUMBERS OF VIABLE LARVAE OF FLATHEAD GREY MULLET *Mugil cephalus*
- 10.50 Pauline Jéhannet**, Arjan Palstra, Ignacio Giménez Nebot, William Swinkels, Leon Heinsbroek, Hans Komen
FIRST EUROPEAN EEL LARVAE PRODUCED USING RECOMBINANT FSH AND LH - *IN VIVO* AND *IN VITRO* EFFECTS ON OOCYTE MATURATION AND REPRODUCTIVE SUCCESS
- 11.10 Arjan Palstra**, Lotte Bouwman, Pauline Jehannet, Leo Kruijt, Henk Schipper, Marco Blokland, William Swinkels, Leon Heinsbroek, Mark Lokman
17A-METHYLTESTOSTERONE AND 17B-ESTRADIOL IMPLANT EFFECTS ON THE INDUCTION OF VITELLOGENESIS IN FEMINIZED EUROPEAN SILVER EELS *Anguilla anguilla*
- 11.30 Leonor Ferrão**, Marina Morini, Victor Gallego, Alicia Felip, Ana Gómez, Luz Pérez, Juan F. Asturiano
COLD SEAWATER PRE-TREATMENT AFFECTS THE SPERMATOGENESIS AND THE REPRODUCTIVE PERFORMANCE OF MALE EUROPEAN EELS

- 11.50 Cinta Zapater**, Gregorio Molés, Catarina Moreira, Tiphaine Monsinjon, Patricia I.S. Pinto, Ana Gómez
EVALUATION OF THE NUCLEAR ESTROGEN RECEPTORS OF SEA BASS *Dicentrarchus labrax* AS TARGET SITES FOR ENDOCRINE DISRUPTING COMPOUNDS: POTENTIAL EFFECTS ON REPRODUCTION AND THEIR USE FOR RISK ASSESSMENT
- 12.10 Anna Wargelius**, Eva Andersson, Fernanda Almeida, Lene Kleppe, Kai Ove Skaftnesmo, Erik Kjærner-Semb, Diego Crespo, Rüdiger W. Schulz, Per Gunnar Fjellidal, Tom Hansen, Birgitta Norberg, Petra Vogelsang, Rolf B. Edvardsen
LOSS OF *FSHR* INHIBITS MATURATION IN MALE ATLANTIC SALMON
- 12.30 Diego Crespo**, Erik Kjærner-Semb, Kai O. Skaftnesmo, Eva Andersson, Per Gunnar Fjellidal, Tom J. Hansen, Rolf B. Edvardsen, Rüdiger W. Schulz, Anna Wargelius, Lene Kleppe
EFFECTS OF *BMP15* KNOCKOUT ON ATLANTIC SALMON GAMETOGENESIS
- 12.50 LUNCH**
- 14.30 Sylvain Milla**, Leila EL Mohajer, Céline Chevalier, Pascal Fontaine
DEEPER *IN VITRO* INVESTIGATION INTO THE POSSIBLE ROLES FOR FOUR MAJOR CORTICOSTEROIDS IN FOM IN RELATION TO THEIR PLASMA KINETICS ALONG THE WHOLE REPRODUCTIVE CYCLE OF FEMALE EURASIAN PERCH *Perca fluviatilis* L.
- 14.50 Francisca Félix**, Raquel Antunes, Laura Leoni, Catarina C.V. Oliveira, Elsa Cabrita
IS THERE A MELATONIN PROTECTIVE EFFECT DURING GILTHEAD SEABREAM SPERM CRYOPRESERVATION?
- 15.10 Rosa Zupa**, Aldo Corriero, Chrysovalentinos Pousis, Ioannis Fakriadis, Maria Papadaki, Letizia Passantino, Constantinos C. Mylonas
SPERMATOGENESIS IN WILD AND CAPTIVE-REARED GREATER AMBERJACK *Seriola dumerili* (RISSO, 1810)
- 15.30 Ioannis Fakriadis**, Maria Papadaki, Constantinos C. Mylonas
SPERMATION ENHANCEMENT OF GREATER AMBERJACK *Seriola dumerili* IN RESPONSE TO GnRH α IMPLANTS OR hCG
- 15.50 Stefano Lancerotto**, I. Fakriadis, I. Sigelaki, C.C. Mylonas
SPONTANEOUS SPAWNING OF CAPTIVE GREATER AMBERJACK *Seriola dumerili* REARED IN SEA CAGES AND TRANSFERRED TO LARGE TANKS DURING THE SPAWNING SEASON
- 16.10 Birgitta Norberg**, Anders Mangor Jensen, Torstein Harboe, Margareth Møgster, Ragnfrid Mangor Jensen, Olav Mjaavatten, Even Birkeland, Endy Spriet, Linda Sandven, Tomasz Furmanek, Frode S. Berven, Ozlem Yilmaz
MOLECULAR MECHANISMS INVOLVED IN ATLANTIC HALIBUT *Hippoglossus hippoglossus* EGG QUALITY
- 16.30 Nils Niepagen**, Leif Berg, Elin Kjørsvik
EFFECTS OF POST OVULATORY AGING ON FERTILISATION, DEVELOPMENT, SURVIVAL AND HATCHING IN ATLANTIC HALIBUT *Hippoglossus hippoglossus* EGGS
- 16.50 Frank Thomas Mlingi**, Velmurugu Puvanendran, Erik Burgerhout, Maren Mommens, Øyvind Johannes Hansen, Emanuele Guercini, Helge Tveiten, Jonna Tomkiewicz, Elin Kjørsvik
PHOTOTHERMAL CONTROL OF SEXUAL MATURATION IN LUMPFISH *Cyclopterus lumpus*
- 17.10 Neil Duncan, Sandra Ramos-Júdez**, Wendy Ángela González-López, Jhons Huayanay Ostos, Noemí Cota Mamani, Carlos Marrero Alemán, José Beirão
LOW SPERM TO EGG RATIO FOR IN VITRO FERTILISATION OFFERS A SOLUTION FOR THE REPRODUCTIVE CONTROL OF CULTURED SOLE *Solea senegalensis*

MICRO / MACRO ALGAE

Tuesday, October 5 10.30 - 17.30 Funchal-Hotel

Chairs: Maria Barbosa, Helena Abreu

- 10.30 Nádía Silva**, Vânia P. Roberto, Leonardo Mata, Katia Pes, Maria Graça Miguel, Paulo J. Gavaia
CHARACTERIZATION OF ANTIOXIDANT AND ANTI-ENZYMATIC ACTIVITIES OF ALGAL EXTRACTS FROM THE PORTUGUESE COAST – POSSIBLE VALUABLE INGREDIENTS FOR FISH DIET SUPPLEMENTATION
- 10.50 Lara Elisabeth Stuthmann**, Revathi Achuthan, Karin Springer, Andreas Kunzmann
INCREASING IRRADIANCES INCREASE ANTIOXIDANT ACTIVITY, TOTAL PHENOLIC CONTENT AND AFFECT PHOTOSYNTHESIS OF ECONOMICALLY IMPORTANT MACROALGA SEA GRAPES *Caulerpa lentillifera*
- 11.10 Urd Grandorf Bak**, Floor Marsman, Elsa Berg, Iris Menger, Ólavur Gregersen
OPEN OCEAN CULTIVATION OF SEAWEED – SCALING UP PROVEN CONCEPTS
- 11.30 Gael Vero Fernandez**, Ajje Pribadi, Julian Pforth, Eva Strothotte, Evert Lataire
NUMERICAL MODELLING OF THE DYNAMIC BEHAVIOUR OF A SIMPLIFIED SEAWEED *Laminaria saccharina* CULTIVATOR NET SYSTEM SUBJECTED TO WAVES AND CURRENT-INDUCED LOADS USING A LUMPED MASS APPROACH
- 11.50 Gonçalo Silva Marinho**, Maria Francisca Sá, Isabel Sousa-Pinto
SEXUAL REPRODUCTION IN THE GREEN MACROALGA *Codium tomentosum* – A “NEW SPECIES” FOR AQUACULTURE
- 12.10 Lara Čizmek**, Sanja Babic, Klaas Van Halewyck, Krunoslav Bojanic, Mladenka Jurin, Ana Dobrincic, Maro Bujak, Maja Galic Percinec, Marin Roje, Verica Dragovic-Uzelac, Rozelindra Což-Rakovac
MARINE-DERIVED POLYSACCHARIDES FROM ADRIATIC SEA: INVESTIGATION OF DIVERSE BIOLOGICAL ACTIVITIES
- 12.50 LUNCH**
- 14.30 Jesus Ruiz**, Rene H. Wijffels, Manuel Dominguez, Maria J. Barbosa
HETEROTROPHIC VS AUTOTROPHIC PRODUCTION OF MICROALGAE: BRINGING SOME LIGHT INTO THE EVERLASTING COST CONTROVERSY
- 14.50 Ana Teresa Gonçalves**, Rita Jacinto, Hugo Pereira, Helena Abreu, Joana Silva, João Navalho, Jorge Dias, Luis Conceição
ALGAE AS A NUTRACEUTICAL INGREDIENT IN AQUACULTURE: UNLEASHING THEIR POTENTIAL AS GUT HEALTH MODULATORS
- 15.10 Felipe do Nascimento Vieira**, Vitor Silva, Patriula Pereira, Mateus Martins, Marco Lorenzo, Herculano Cella, Rafael Lopes, Roberto Derner, Paola Magallón
EFFECTS OF MICROALGAE ADDITION AND FISH FEED SUPPLEMENTATION IN THE INTEGRATED REARING OF PACIFIC WHITE SHRIMP AND NILE TILAPIA USING BIOFLOC TECHNOLOGY
- 15.30 Sander van den Burg**, Sophie Koch, Trond Selnes, Maggie Skirtun
THE ROLE OF SEAWEEDS IN FUTURE CIRCULAR CLIMATE SMART FOOD SYSTEMS
- 15.50 Patricia Diogo**, Gonçalo Bastos, Ana Coelho, Sara Castanho, Ana Mendes, Diogo Esteves, Laura Ribeiro, Cátia Marques, Alexandre Rodrigues, Florbela Soares, Victória del Pino, Pedro Pousão, João Navalho
NEW MICROALGAE FORMULATIONS FOR GREEN WATER TECHNIQUE: CASE STUDY OF MEAGRE *Argyrosomus regius* LARVAL REARING

- 16.10 Maarten Muys**, Luc Roef, Mathieu Wille, Vincent Vermeylen, Mark Michiels
OPTIMIZATION OF PRODUCTIVITY, FATTY ACID AND FUCOXANTHIN CONTENT OF *Chaetoceros muelleri* AND *Thalassiosira pseudonana* IN THE PROVIAPT FLAT-PANEL PHOTOBIOREACTOR
- 16.30 Bárbara Guimarães**, Kieke de Boer, Pieter Gremmen, Anemoon Drinkwaard, Rick Wieggers, René H. Wijffels, Maria J. Barbosa, Sarah D' Adamo
SELENIUM ENRICHMENT IN THE MARINE MICROALGA *Nannochloropsis oceanica*
- 16.50 Christos Latsos**, Jasper van Houcke
UNRAVELLING *Rhodomonas salina*

FISH WELFARE

Tuesday, October 5 10.30 - 17.30 Lisboa-Hotel

Chairs: Benjamin Costas, Ana Roque

- 10.30 Raquel Vieira**, D. Sousa, C. Venâncio, L. Félix
ANAESTHETIC PROFILE AND BIOCHEMICAL EFFECTS OF MENTHOL AND THYMOL IN ZEBRAFISH MODEL
- 10.50 João Correia**, David Silva, Gonçalo Graça, Ivan Beltran, João Reis, Luís Silva, Pedro Marques, Rui Guedes, Telmo Morato
RECENT ADVANCES IN MARINE ANIMALS' TRANSPORT
- 11.10 Daniela Resende**, Ricardo Pereira, Cristina Velasco, David Dominguez, Miguel Pereira, Carlos Pereira, Bianca Marques, Cristina Rocha, Manuela Pintado, Luísa M.P. Valente
EFFECT OF THE DIETARY INCLUSION OF BLOOD HYDROLYSATES ON EUROPEAN SEABASS RESPONSE TO STRESS
- 11.30 R. Azeredo**, M. Machado, D. Peixoto, B. Costas
CHARACTERIZATION OF MOLECULAR, CELLULAR AND HUMORAL IMMUNE MARKERS IN THE EUROPEAN SEABASS *Dicentrarchus labrax* UNDER CHRONIC INFLAMMATORY CONDITIONS
- 11.50 Lucia Drabikova**, Per Gunnar Fjelldal, Adelbert De Clercq, M. Naveed Yousaf, Thea Morken, Charles McGurk, P. Eckhard Witten
A LONG-TERM DEVELOPMENTAL STUDY OF DEFORMITIES IN ATLANTIC SALMON: THE RECOVERY OF HYPER-RADIODENSE VERTEBRAE
- 12.10 Malthe Hvas**, Ole Folkedal, Frode Oppedal, Lars Helge Stien
FISH WELFARE IMPLICATIONS OF PROLONGED FASTING PERIODS IN ATLANTIC SALMON
- 12.30 Inês Carvalho**, Sofie C. Remø, Diogo Peixoto, Nini H. Sissener, Per Gunnar Fjelldal, Rune Waagbø, Benjamin Costas
EFFECTS OF DIETARY HISTIDINE AND PLANT LIPIDS ON THE ATLANTIC SALMON *Salmo salar* HEALTH STATUS FOLLOWING TRANSFER TO SEAWATER
- 12.50 LUNCH**
- 14.30 Remigiusz Panicz**, Piotr Eljasik, Christophe Klopp, Malgorzata Sobczak, Jacek Sadowski
ASSESSMENT OF COMMON CARP WELFARE AND HEALTH UNDER ECO-INTENSIFICATION IN RAS BASED ON INTESTINE MORPHOLOGY, MICROBIOME COMPOSITION AND CHARACTERISTICS OF GUT-BRAIN AXIS

- 14.50 Cláudia Raposo de Magalhães**, Ana Paula Farinha, Raquel Carrilho, Denise Schrama, Marco Cerqueira, Pedro M. Rodrigues
IN SEARCH OF STRESS BIOMARKERS: LABEL-FREE SHOTGUN PROTEOMICS ANALYSIS OF GILTHEAD SEABREAM HEPATIC AND MUCUS PROTEOME
- 15.10 Zachary Dellacqua**, Claudia Di Biagio, Arianna Martini, Marisa Barata, Laura Ribeiro, Pedro Pousão-Ferreira, Andrea Fabris, Clara Boglione
DISTINGUISHING THE IMPACTS OF REARING DENSITY VERSUS TANK VOLUME ON *Sparus aurata* DURING THE PREONGROWING PHASE
- 15.30 Pavlos Makridis**, Aggeliki Grimpampi, Eleni Kakaridi, Ioannis E. Papadakis, Asbjorn Bergheim
OXYGENATION OF SEA CAGES AND MONITORING OF OXYGEN FLUCTUATIONS IN TWO FISH FARMS IN GREECE
- 15.50 Paula Canada**, Benjamin Costas, Raquel Xavier, Miguel Santos, Ana Couto, Marco Cerqueira, Sergio Fernández-Boo, Marlene Pinheiro, Teresa Neuparth, Lydia Png-Gonzalez, Ana Garcia, Ana Pereira, Carlos Andrade, Natacha Nogueira
CAGED GILTHEAD SEABREAM LIKES BITING THE NETS. SO WHAT?
- 16.10 Pablo Arechavala-Lopez**, Ana R. Oliveira, Caroline M. Maia, Maria J. Cabrera-Alvarez, Joao L. Saraiva
STRUCTURAL ENRICHMENT IN GILTHEAD SEABREAM AQUACULTURE: FUNDAMENTALS AND APPLICATIONS
- 16.30 Elvira Fatsini**, Zélia Vélez, Peter C. Hubbard, Catarina C.V. Oliveira, Catarina Marques, Florbela Soares, Pedro Pousão, Tomás Santos, Bernardete Rodrigues, Elsa Cabrita
THE USE OF AN ENVIRONMENTAL ENRICHMENT MODULATES STRESS RESPONSE AND CHEMICAL COMMUNICATION IN SENEGALESE SOLE *Solea senegalensis*
- 16.50 Dimitra Georgopoulou**, Orestis Stavrakidis-Zachou, Nikos Mitrizakis, Nikos Papandroulakis
HOW DOES TAG IMPLANTATION AFFECT THE BEHAVIOUR OF EUROPEAN SEABASS *Dicentrarchus labrax*?
- 17.10 Manuel Gestó**, Alfred Jokumsen
DOES STRUCTURAL ENRICHMENT SUPPORT THE WELFARE OF FARMED RAINBOW TROUT JUVENILES IN INDOOR FACILITIES?

MEDITERRANEAN AQUACULTURE INTEGRATED DEVELOPMENT

Tuesday, October 5 10.30 - 17.30 Mezzanine-Casino

Chair: Bernardo Basurco

- 10:30 WELCOME.** - INTRODUCTION OF MEDAID AND PERFORMFISH PROJECTS

Session on Improving Markets, Economic Performance and Governance

- 10:40 C. Aguilera** (IRTA) and B. Basurco (CIHEAM)
MEDAID'S TOOL BOX
- 10:55 Irene Peral** (AZTI)
MAIN RESULTS AND OUTPUTS FOR MEDAID'S WP5: PRODUCT DEVELOPMENT, MARKET AND CONSUMER ASSESSMENT
- 11:05 Raquel Llorente** (AZTI)
AQUACULTURE SEAFOOD PRODUCTS INNOVATIONS IN MEDAID PROJECT AZTI
- 11:12 TBD** (Arhus, IRTA, AZTI)
EUROPEAN CONSUMER ASSESSMENT FOR PRODUCTS MARKET SUCCESS

- 11:19 Ekaterina Tribilustova** (EUROFISH)
MAIN RESULTS AND OUTPUTS FOR PERFORMFISH WP5: REINFORCING THE MARKETING OF EUROPEAN SEABASS AND SEABREAM PRODUCTS. CONSUMER PERCEPTION STUDIES IN SIX EUROPEAN MARKETS.
- 11:39 José Fernández-Polanco** (University of Cantabria)
MAIN RESULTS AND OUTPUTS FOR MEDAID'S WP6: IMPROVING BUSINESS PERFORMANCE AND DEVELOPMENT OF STRATEGIC MARKETING PLANS
- 11:49 Manuel Luna** (University of Cantabria)
PRODUCTION OPTIMIZATION IN AQUACULTURE BASED ON DATA AND AI TECHNIQUES
- 11:56 Jose Luis Fernández-Sánchez** (University of Cantabria)
WHAT OPERATIONAL FACTORS ARE MORE IMPORTANT ECONOMICALLY IN THE MEDITERRANEAN SEA BASS AND SEA BREAM FARMING?
- 12:03 José Pérez** (IFREMER)
MAIN RESULTS AND OUTPUTS FOR MEDAID'S WP7: SOCIAL ACCEPTABILITY AND GOVERNANCE OF AQUACULTURE DEVELOPMENT IN THE MEDITERRANEAN
- 12:13 Davide Fezzardi/Fabio Massa** (FAO)
THE SOCIAL ACCEPTABILITY OF AQUACULTURE ADDRESSED IN THE MEDITERRANEAN
- 12:20 José A. Pérez Agúndez** (IFREMER), Pascal Raux (UBO), Alexis Conides (HCMR)
EXPLORING SOCIAL ACCEPTABILITY THROUGH FIELDWORK CONDUCTED IN LOCAL CASE STUDIES
- 12:27 DISCUSSION**
- 13:00 Lunch Break and Visit Trade Show**
- Session on Improvements on Production and Zootechnics**
- 15:30 Cristóbal Aguilera** (IRTA Sant Carles de la Ràpita)
MEDAID'S DASH BOARD
- 15:45 Alicia Estevez** (IRTA Sant Carles de la Ràpita)
MAIN RESULTS AND OUTPUTS FOR MEDAID'S WP2: IMPROVING ZOOTECNICAL PERFORMANCE
- 15:55 Constantinos Mylonas**, Maria Papadaki our Elena Sarropoulou (HCMR)
THE TEMPERATURE EFFECTS ON GROWTH, SEX RATIO, DEFORMITIES
- 16:02 Arjan Palstra** (Wageningen University & Research)
OPTIMAL FLOW FOR SEABREAM DURING LAND-BASED REARING AND ACTIVITY PATTERNS IN THE SEA CAGE
- 16:09 Giovanna Marino** (ISPRA)
MAIN RESULTS AND OUTPUTS FOR PERFORMFISH WP7: A BENCHMARKING TOOL BASED ON KEY PERFORMANCE INDICATORS FOR SEA BASS AND SEA BREAM AQUACULTURE
- 16:29 Anna Sonesson** (NOFIMA)
MAIN RESULTS AND OUTPUTS FOR MEDAID'S WP3: GENETICS AND BREEDING
- 16:39 Ross Houston** (University of Edinburgh)
DEVELOPMENT AND APPLICATIONS OF THE MEDFISH SEABASS AND SEABREAM SNP ARRAY

- 16:46 John Bastiaansen** (WUR)
GENOTYPE BY ENVIRONMENT INTERACTION IN TWO COMMERCIAL PRODUCTION SITES OF GILTHEAD SEABREAM IN THE MEDITERRANEAN
- 16:53 Edgar Brun** (Norwegian Veterinary Institute)
MAIN RESULTS AND OUTPUTS FOR MEDAID'S WP4: HEALTH MANAGEMENT AND DISEASES AND FISH WELFARE
- 17:03 Saraya Tavornpanich** (Norwegian Veterinary Institute)
A SYSTEMATIC APPROACH FOR QUANTIFYING BIOSECURITY MEASURES
- 17:10 Niels Lorenzen** (DTU), Anna Toffan (IZSve)
VLP VACCINATION AGAINST VNN
- 17:17 DISCUSSION**

OCEAN LITERACY / AWARENESS / KNOWLEDGE MANAGEMENT

Tuesday, October 5 10.30 - 17.30 View Room-Casino

Chairs: Iwona Gin, Rocio Robles

- 10.30 Violeta Stancu**, Rikke Nyland Christensen, Athanasios Krystallis, Irene Peral, Sonia García Muñoz, Luis Guerrero, Karen Brunso
HOW TO BEST TARGET NEW AQUACULTURE FISH PRODUCTS TO INTERNATIONAL CONSUMER SEGMENTS
- 10.50 Marija Banovic**
DO CONSUMERS WANT TO EAT ALTERNATIVE PROTEINS FROM FISH WASTE? RAISING EUROPEAN CONSUMER AWARENESS THROUGH COMMUNICATION
- 11.10 Marija Banovic**, Jessica Aschemann-Witzel, Rosires Deliza
CONSUME IT, YET UNAWARE? THE INFLUENCE OF A HEALTH GOAL ON CHOICE OF AQUACULTURE PRODUCTS AMONG BRAZILIAN CONSUMERS
- 11.30 Estelle Soulet**, Iwona Gin, Lotte Bronswijk
EATING ALGAE AS A REGULAR PART OF A EUROPEAN DIET? IMPROVING THE GENERAL PUBLICS' LITERACY OF ALGAE TO ENCOURAGE A CHANGE IN CONSUMER EATING HABITS
- 11.50 Mariana Mata Lara**, Maria Vidal Rigo, Carme Alomar, Salud Deudero, Lisa Devriese, Fien De Raedemaeker, Matthias Sandra, Susanne Altvater, Margherita Zorgno, Iwona Gin, Guillaume Lheureux, Maria Vale, Claudia Hipolito
TOOLBOX FOR GOOD MARINE LITTER MANAGEMENT IN THE AQUACULTURE SECTOR
- 12.10 Paola Parretti**, Mariana Martins, João Monteiro, Silvia Almeida, Ana Pombo, Carlos Andrade, João Canning-Clode
PERCEPTIONS AND INTERACTIONS OF MARINE LITTER AND OPEN-OCEAN AQUACULTURE FACILITIES: MADEIRA ISLAND AS CASE STUDY
- 12.30 LUNCH**
- 14.30 Rachel Tiller**, Håvard Almås, Ina Helene Ahlquist, Dorothy Dankel, Magnus Hakvåg, Yajie Liu, William Tiller, Jamileh Javidpour, Emily Cowan
OCEAN LITERACY AND HOW SERIOUS GAMES CAN PLAY A PART: THE CASE OF THE JELLYFISH AND MICROPLASTICS GOVERNANCE GAME "MOREGOJELLY!"
- 14.50 Alexandra Neyts**, Kari Thyholt, Marit Bull, Linn Benedicte Brubakken, Bjørn Egil Asbjørnslett, Andreas Misund
CAPACITY BUILDING IN AQUACULTURE: A TOOLBOX FOR REGIONAL DEVELOPMENT

- 15.10 Adrianna Kochanska**, Michaela Aschan
DEVELOPMENT OF A MASSIVE OPEN ONLINE COURSE (MOOC) IN SUSTAINABLE AQUACULTURE FOR LOW TROPHIC SPECIES
- 15.30 Iwona Gin**
THE EU4OCEAN COALITION FOR OCEAN LITERACY AND SUSTAINABLE FOOD FROM THE OCEAN
- 15:50 Ana Rotter**, Katja Klun, Ernesta Grigalionyte-Bembic, Rachel Tiller
ADVANCES AND OPPORTUNITIES IN SCIENCE COMMUNICATION: TIPS, TRICKS AND LESSONS LEARNED FROM PARTICIPATION IN GOJELLY H2020 PROJECT
- 16.10 Kristine Vedal Størkersen**, Trine Thorvaldsen, Tonje Osmundsen, Petter Grytten Almklov, Marit Schei Olsen, Samson Afewerki, Vilde Steiro Amundsen, Andreas Misund
MEGA DEVELOPMENT PROJECTS IN NORWEGIAN FISH FARMING: HANDLING LOCAL AND GLOBAL RISKS FOR THE COMMON GOOD?
- 16.30 António Almeida**, Ricardo Gouveia, Luiz Machado
AQUACULTURE AND THE PRIMARY SECTOR: IMPACTS ON THE LOCAL ECONOMY

MARINE SPATIAL PLANNING AND CONSERVATION

Tuesday, October 5 14.30 - 17.30 Berlim-Hotel

Chairs: Raphaela Legouvello, Ricardo Haroun

- 14.30 Lucia Mascorda Cabre**, Phil Hosegood, Martin Attrill, Emma Sheehan
OCEANOGRAPHIC AND ECOLOGICAL INTERACTIONS WITH AN OFFSHORE, LONG-LINE MUSSEL FARM
- 14.50 Øivind Strand**, Hui Liu, Joao G. Ferreira, Jon Grant, Ellen Sofie Grefsrud, Pia Kupka Hansen, Qianwen Sun, Jenny Weitzman
STATUS AND PERSPECTIVES ON MARICULTURE PLANNING AND IMPLEMENTATION - THE MARINE SPATIAL PLANNING (MSP) AND MARINE FUNCTIONAL ZONING (MFZ) FRAMEWORKS
- 15.10 Daniele Brigolin**, Erika M.D. Porporato, Roberto Pastres
AQUACULTURE AND MARITIME SPATIAL PLANNING: LONGLINE FARMS AS ELEMENTS OF DESIGN FOR THE COASTAL SEASCAPE
- 15.30 Andrej Abramic**, Sachi Kaushik, Alejandro García Mendoza, Natacha Nogueira, Carlos Andrade, Ricardo Haroun
MARITIME SPATIAL PLANNING PRINCIPLES AND SUSTAINABLE AQUACULTURE DEVELOPMENT: CASE STUDIES IN MADEIRA AND CANARY ISLANDS
- 15.50 Francisca Romero**, Pablo Sanchez-Jerez, Gloria Martínez, Victoria Fernandez-Gonzalez, Maria del Mar Agraso, Kilian Toledo-Guedes
A PROXY TO CARRYING CAPACITY FOR MEDITERRANEAN AQUACULTURE
- 16.10 Arthur Friedrich**
SOLUTIONS TO A BETTER FUTURE FOR AQUACULTURE AT MADEIRA ARCHIPELAGO
- 16.30 ROUNDTABLE - MPAs and Aquaculture**

NUTRITION, PHYSIOLOGICAL FUNCTIONS

Tuesday, October 5 14.30 - 17.30 Congress Hall
 Chairs: Claudia Aragão, Stéphanie Fontagné-Dicharry

- 14.30 Elisa Ciavoni**, Marc Koppelaars, Roel Maas, Philip Antony Jesu Prabhu, Johan Wilhelmus Schrama
 EFFECT OF DIETARY ELECTROLYTE BALANCE AND MOISTURE CONTENT ON THE INTERPLAY BETWEEN WATER BALANCE AND DIGESTIVE FUNCTIONING ALONG THE GASTROINTESTINAL TRACT OF FRESHWATER RAINBOW TROUT *Oncorhynchus mykiss*
- 14.50 Dean Porter**, Rebecca Heavyside, David Peggs, Charles McGurk, Sam Martin
 GALT LEUCOCYTES AS A HEALTH SCREEN FOR FUNCTIONAL FEEDS IN RAINBOW TROUT *Oncorhynchus mykiss*
- 15.10 Eric Leclercq**, Mark Rawling, Victoria Valdenegro, Elisabeth Aasum, Luisa M. Vera, Mathieu Castex, Hervé Migaud
 FUNCTIONAL NUTRITION MITIGATES THE IMPACT OF REPETITIVE NON-MEDICINAL INTERVENTIONS IN SEAWATER ATLANTIC SALMON
- 15.30 Denise Schrama**, Cláudia Raposo de Magalhães, Annette Kuehn, Sofia Engrola, Pedro M. Rodrigues
 EUROPEAN SEABASS *Dicentrarchus labrax* ALLERGENICITY AND FISH QUALITY AFTER EDTA SUPPLEMENTATION
- 15.50 Peng Yin**, Bjørn Thrandur Björnsson, Tu Ahn Vo, Sofie Remø, Per Gunnar Fjellidal, Takaya Saito, Tomasz Furmanek, Rolf B. Edvardsen, Tom Hansen, Sandeep Sharma, Rolf Erik Olsen, Elin Kjørsvik, Kristin Hamre
 THE INTERACTION BETWEEN GROWTH AND REDOX SYSTEM IN DEVELOPING ATLANTIC SALMON *Salmo salar* SMOLT
- 16.10 Marius Bidon**, Claudia Marchan Moreno, Khoulood El Hanafi, Silvia Queipo Abad, Jérôme Roy, David Amouroux, Maité Bueno, Zoyne Pedrero-Zayas, Stéphanie Fontagné-Dicharry
 DIETARY METHYLMERCURY AND SELENIUM INTERACTIONS IN RAINBOW TROUT JUVENILES *Oncorhynchus mykiss*
- 16.30 Laura Ribeiro**, Marisa Barata, Ravi Araujo-Luna, Vera Barbosa, Narcisca Bandarra, Florbela Soares, Cátia Marques, Jorge Dias, António Marques, Pedro Pousão-Ferreira
 BIOFORTIFIED FISH PRODUCTS FOR CONSUMERS WITH NATURAL IODINE, SELENIUM AND FATTY ACIDS: IMPACTS ON FISH PHYSIOLOGY
- 16.50 Trine Ytrestøyl**, Thea Morken, Julia Mullins, Alexander Dikiy, Pernille Skavang, Tone-Kari Østbye, Bjarne Hatlen, Aleksei Krasnov, Bente Ruyter
 EFFECT OF DIETARY RETINOL CONCENTRATION ON ASTAXANTHIN UTILISATION IN ATLANTIC SALMON AND IMPLICATIONS OF STRESS
- 17.10 Antony Jesu Philip**, Marius Bidon, Laurance Larroquet, Stephanie Fontagné-Dicharry
 ZINC AND COPPER NUTRITION AT FIRST FEEDING AFFECTS GROWTH AND LIPID METABOLISM IN JUVENILE *Oncorhynchus mykiss*

EAS STUDENT GROUP WORKSHOP

NEXT-GENERATION AQUACULTURE: THE FUTURE OF EU FISH FARMING

Tuesday, October 5 14.30 - 17.30 Caracas- 4th Floor

Chair: Elisavet Syropoulou



TUESDAY

- 14:30 Elisavet Syropoulou**
WELCOME, STATUS OF THE EAS STUDENT GROUP AND INTRODUCTION TO THE WORKSHOP
- 14:35 Rodrigo Mendes**
PORTUGUESE AQUACULTURE: AN OVERVIEW OF THE SECTOR
- 14:45 : Arthur Friedrich**
HOW TO MAKE EU BLUE WITH THE YOUNG OCEAN ADVOCATE PROGRAM: DISCOVER THE OCEANUM PORTUGAL HUB
- 14:55 Silvia Blanco, Jorge García Márquez**
THE ROLE AND EMERGING TRENDS OF SUSTAINABLE AQUAFEEDS
- 15:05 Mariana Ferreira**
LONG-TERM SUSTAINABILITY OF AQUATIC PRODUCTION SYSTEMS
- 15:15 Sara Roje**
EMERGING AQUACULTURE SPECIES & DIVERSIFICATION
- 15:25 Anil A. Tellbüscher**
TECHNOLOGICAL ADVANCES IN AQUACULTURE - AN OUTLOOK
- 15:35 Q & A Session**
- 15:45 Jorge Dias**
FUTURE TRENDS IN FISH NUTRITION AND FEEDING
- 15:55 Ana Basto, Alexandra Marques, M. Beatriz P.P. Oliveira, Luisa M.P. Valente**
FEEDNETICS™ AS A TOOL TO PREDICT THE LONG-TERM EFFECTS OF FEEDING DEFATTED *Tenebrio molitor* LARVAE MEAL ON EUROPEAN SEA BASS GROWTH AND BODY COMPOSITION UNDER FARM-SCALE CONDITIONS
- 16:05 Q & A Session**
- 16:15 Laura López Mas**
WHY CONSIDER CONSUMERS IN THE AQUACULTURE SECTOR? TWO STUDY CASES

- 16:25 Nefeli Tsaousi**
THE COMPLETE MITOCHONDRIAL DNA OF THE RED PORGY *Pagrus pagrus* (AEGEAN SEA): SPECIES IDENTIFICATION THROUGH MTDNA COMPARISONS
- 16:35 João Romero**
A MATHEMATICAL MODELLING APPROACH TO ASSIST INFECTIOUS DISEASE MANAGEMENT IN MARINE AQUACULTURE
- 17:45 Francisca Romero Peral**
CARRYING CAPACITY AS A PLANNING AND MANAGEMENT SYSTEM FOR SPANISH AQUACULTURE
- 17:55 Dinara Bekkozhayeva**
IMAGE BASED AUTOMATIC INDIVIDUAL IDENTIFICATION OF FISH
- 17:05 Quiz**

WEDNESDAY, October 6

PLENARY 2

Wednesday, October 6 09.00 - 10.00 Auditorium
Chairs: Maria Teresa Dinis, Sachi Kausik

- 09.00 Pedro Encarnação**
VERTICAL INTEGRATION – SECURING SUPPLY, QUALITY AND SUSTAINABILITY: THE JMA FISH CASE
- 10:00 BREAK**

PROCESSING, CO-PRODUCTS AND VALUE ADDITION

Wednesday, October 6 10.30 - 12.50 Berlim-Hotel
Chairs: Kriton Grigorakis, Maria Leonor Nunes

- 10.30 Gianluca Bleve**, Francesca A. Ramires, Stefania De Domenico, Antonia Gallo, Gianluca De Rinaldis, Danilo Migoni, Clara Albano, Francesco Fanizzi, Rasa Slizyte, Dror Angel, Katja Klun, Jamileh Javidpour, Stefano Piraino, Antonella Leone
JELLYFISH BASED NOVEL FOOD PRODUCTS IN EUROPE: A STORY IS STARTING
- 10.50 Vera Barbosa**, Ana L. Maulvault, Patricia Anacleto, Marta Santos, Mónica Mai, Helena Oliveira, Inês Delgado, Marisa Barata, Laura Ribeiro, Piotr Eljasik, Remigiusz Panicz, Jorge Dias, Pedro Pousão-Ferreira, Maria L. Carvalho, Marta Martins, António Marques
ECO-INNOVATIVE FORTIFIED FARMED FISH: NUTRITIONAL BENEFITS ASSOCIATED WITH THE CONSUMPTION OF FORTIFIED GILTHEAD SEABREAM *Sparus aurata* AND COMMON CARP *Cyprinus carpio*
- 11.10 Laurie Carol Hofmann**, Isabel Cardoso, Joachim Henjes, Inka Bartsch, Maarten Heins, Ramona Bosse, Lisa Klusmann, Frederike Reimold, Ina Enders, W. Dietmar Hoffmann, Bela H. Buck
PACKAGING SOLUTIONS FROM LAND-BASED MACROALGAE AQUACULTURE

- 11.30 Mado Kotsiri**, Skarlatos Dedos, Kriton Grigorakis, Tsironi Theofania
EDIBLE SILK FOR PACKAGING OF HIGH ADDED-VALUE SEAFOOD PRODUCTS
- 11.50 Mado Kotsiri**, Dimitra Kogiannou, Eleni Gogou, Kriton Grigorakis
VARIOUS MODIFIED ATMOSPHERE PACKAGING (MAP) CONDITIONS EFFECTS ON CHEMICAL SHELF-LIFE OF EUROPEAN SEA BASS
- 12.10 Irene Peral**, Raquel Llorente
DOES INDUSTRIAL PROCESSING AFFECT HEALTH AND NUTRITIONAL PROPERTIES OF AQUACULTURE SEAFOOD PRODUCTS?

EARLY DEVELOPMENT

Wednesday, October 6 10.30 - 12.50 Congress Hall
Chairs: Giorgos Koumoundouros, Josep Rotllant Moragas

- 10.30 Stefanos Fragkoulis**, Chara Kourkouta, Alice Printzi, George Geladakis, Dimitris Kerasovitis, George Koumoundouros
RECOVERY OF HAEMAL LORDOSIS IN EUROPEAN SEA BASS *Dicentrarchus labrax*
- 10.50 Arne Malzahn**, Bjarne Kvæstad, Elin Kjorsvik, Laura García-Calvo, Anna Sigrid Norberg Aase, Heidi Hagen, Bjørn Henrik Hansen, Deni Ribicic, Roman Netzer, Andreas Hagemann
THE EFFECT OF DIFFERENT LIVE FEED ORGANISMS ON LARVAL BALLAN WRASSE *Labrus bergylta*
- 11.10 Frederic Clota**, Benjamin Geffroy, Alain Vergnet, Marie-Odile Blanc, Stephane Lallement, François Ruelle, Alexander Goikoetxea, Maeva Leitwein, François Allal, Marc Vandeputte
LATE HIGH TEMPERATURE PROMOTES FAST GROWTH AND FEMALE SEX DIFFERENTIATION IN EUROPEAN SEA BASS *Dicentrarchus labrax* WHILE EARLY PHOTOPERIOD HAS NO EFFECT ON EITHER TRAIT
- 11.30 Elena Sarropoulou**, Maria Papadaki, Elisavet Kaitetzidou, Ioannis Papadakis, Dimitris Sfakianakis, Constantinos C. Mylonas
INSIGHTS FROM HIGH THROUGHPUT NON-CODING RNA SEQUENCING DURING EUROPEAN SEA BASS DEVELOPMENT REARED AT DIFFERENT TEMPERATURES
- 11.50 Callum Howard**, John Taylor, Michaël Bekaert, Brian Craig, Maren Mommens, Matias Medina, Herve Migaud
IMPACT OF THERMAL SHOCKS DURING INCUBATION ON EGG DEVELOPMENT AND JUVENILE PERFORMANCE IN DIPLOID AND TRIPLOID ATLANTIC SALMON *Salmo salar* SIBLINGS
- 12.10 Paulo J. Gavaia**, Sunil Poudel, Gil Martins, Marisol Isquierdo, M. Leonor Cancela
PROTECTIVE EFFECTS OF ANTIOXIDANTS TO PREVENT DOXORUBICIN-INDUCED SKELETAL DEFORMITIES IN FISH LARVAE
- 12.30 Daniela E. Sganga**, Sebastian N. Politis, Flemming T. Dahlke, David Mazurais, Ana Servili, Sune R. Sørensen, Ian A. Butts, Francesca Bertolini, Jonna Tomkiewicz
CO₂/PH IMPACTS THE SURVIVAL OF EUROPEAN EEL *Anguilla anguilla* EMBRYOS WHEN INCUBATED IN RECIRCULATION AQUACULTURE SYSTEMS

PRECISION FARMING, MODELING AND ARTIFICIAL INTELLIGENCE - CONTINUED

Wednesday, October 6 10.30 - 17.30 Lisboa-Hotel

Chairs: Martin Fore, Fearghal O'Donncha

WEDNESDAY

- 10.30 Hamed Jafarzadeh**, Marco Belcastro, Brendan O'Flynn
IMPAQT UNDERWATER ACOUSTIC TELEMETRY PLATFORM: RECEIVER DESIGN
- 10.50 Jon Grant**, Caitlin Stockwell, Ramon Filgueira
THE EFFECTS OF OXYGEN SUPPLEMENTATION ON FARMED ATLANTIC SALMON *Salmo salar* BEHAVIOR USING ACOUSTIC TELEMETRY
- 11.10 Roberto Pastres**, Camilla Bertolini, Jacob J. Capelle, Tjeerd J. Bouma, Edouard Royer
A MACHINE LEARNING CLUSTERING ALGORITHM TO IDENTIFY GAPING BEHAVIOUR IN *Mytilus* spp. UNDER CONTRASTING ENVIRONMENTAL CONDITIONS
- 11.30 Sveinung Ohrem**, Walter Caharija, Herman Biørn Amundsen, Leif Magne Sunde, Eleni Kelasidi, Kevin Frank
TOWARDS AUTONOMOUS ROV OPERATIONS IN FISH FARMS – RECENT DEVELOPMENTS IN NAVIGATION AND CONTROL
- 11.50 Rui Caldeira**, João Monteiro, Carlos Lucas, Jesus Reis, Patrício Ramalhosa, Sílvia Almeida, Sahar Chebaene, Pedro Diniz, Natacha Nogueira, João Canning-Clode, Carlos Andrade
ADVANCE SENSING OF OCEANIC AQUACULTURE SYSTEMS
- 12.10 Petter Olsen**
SHOULD TRACEABILITY SYSTEMS IN THE AQUACULTURE INDUSTRY BE BASED ON BLOCKCHAIN TECHNOLOGY?
- 12.30 Maxime Paris**, Lucas Schaeffer, Romain Pete, Sebastien Mas, Florence Bouillé-Chada, Dimitri Trotignon
SENSITHAU PROJECT: RISK ANTICIPATION - FOUR SOURCES OF DATA TO BUILT RISK PREDICTIVE MODELS

NUTRITION, PHYSIOLOGICAL FUNCTIONS - CONTINUED

Wednesday, October 6 10.30 - 17.30 Congress Auditorium

Chairs: Claudia Aragão, Stéphanie Fontagné-Dicharry

- 10.30 Jaume Pérez-Sánchez**, Maria Carla Piazzon, Fernando Naya-Català, Gabriella do Val Pereira, Itziar Estensoro, Raquel Del Pozo, Josep Alvar Calduch-Giner, Waldo Gabriel Nuez-Ortín, Oswaldo Palenzuela, Ariadna Sitjà-Bobadilla, Jorge Dias, Luis E.C. Conceição
FISH MEAL-FREE DIETS SUPPLEMENTED WITH HEALTH PROMOTERS SUPPORT OPTIMAL GROWTH IN GILTHEAD SEA BREAM, WITH BENEFICIAL CHANGES IN GENE EXPRESSION, INTESTINAL MICROBIOTA AND IMPROVED INTESTINAL DISEASE RECOVERY
- 10.50 Juan Fuentes**, Rocio Robles, L. Bermudez, S.F. Gregório, W. Nuez
IN VITRO TOOLS TO UNDERSTAND THE DIETARY EFFECTS N THE INTESTINAL INTEGRITY AND PHYSIOLOGY OF GILTHEAD SEA BREAM *Sparus aurata*
- 11.10 Daniela Resende**, Benjamin Costas, Tiago Sá, Umberto Golfetto, Marina Machado, Miguel Pereira, Carlos Pereira, Bianca Marques, Cristina Rocha, Manuela Pintado, Luísa M.P. Valente
DIETARY INCLUSION OF 3% BLOOD HYDROLYSATES IMPROVES THE DISEASE RESISTANCE TO TENACIBACULOSIS IN EUROPEAN SEABASS

- 11.30 Karthik Masagounder**, Yuanyuan Zhou, Sarah He, Chaoxia Ye
GROWTH PERFORMANCE, FEED UTILIZATION, AND TAURINE SYNTHESIS OF COMMON CARP FED DIFFERENT LEVELS AND SOURCES OF DIETARY METHIONINE
- 11.50 Susana Pereira**, Mariana Hinzmann, Diogo Peixoto, Maria Morais, Wilson Pinto, Luís Conceição, Benjamín Costas
MODULATORY EFFECTS OF ALGAE AND GRAPE SEED DIETS ON IMMUNE AND OXIDATIVE STRESS RESPONSES OF SENEGALESE SOLE *Solea senegalensis* POST-LARVAE CHALLENGED AGAINST *Tenacibaculum maritimum*
- 12.10 Rita Teodósio**, Sofia Engrola, Miguel Cabano, Rita Colen, Karthik Masagounder, Cláudia Aragão
INCREASING THE SUSTAINABILITY OF TILAPIA PRODUCTION THROUGH DIET OPTIMISATION
- 12.30 Johan Schrama**, J. Kals, K. Masagounder, J. Mas-Muñoz, Thuat Phan
VARIATIONS IN ENERGY UTILISATION EFFICIENCIES OF DIGESTED PROTEIN, FAT AND CARBOHYDRATES IN DIFFERENT FISH SPECIES
- 12.50 LUNCH**
- 14.30 Nathan Favalier**, H. Li, M. Marchand, A. Surget, P. Maunas, N. Turonnet, S. Panserat, L. Marandel
SHORT-TERM EFFECT OF A LOW PROTEIN HIGH CARBOHYDRATE DIET ON GLUCOSE AND LIPID METABOLISM IN THE LIVER OF MATURE FEMALE AND MALE, AND NEOMALE RAINBOW TROUT
- 14.50 Stuart McMillan**, John F. Taylor, Brett D. Glencross, Xu Gong, Douglas R. Tocher, Pedro Gómez-Requeni, Mónica B. Betancor
DO EFFECTS OF NUTRITIONAL PROGRAMMING IN FRESHWATER CONTINUE DURING SEAWATER REARING OF ATLANTIC SALMON *Salmo salar*?
- 15.10 Irene García-Meilán**, Irina Agredano, Anna Profitós, Ramón Fontanillas, Encarnación Capilla, Isabel Navarro, Ángeles Gallardo
INTESTINAL OXIDATIVE STATUS OF GILTHEAD SEA BREAM FED WITH DIETS OF DIFFERENT FATTY ACID PROFILE
- 15.30 Marta Carvalho**, Daniel Montero, Paolo Domenici, Juan Manuel Afonso, Marisol Izquierdo
THE EFFECT OF CONVENTIONAL AND NOVEL OILS ON BRAIN FATTY ACID INCORPORATION, BEHAVIOUR AND NEURAL FUNCTION OF GILTHEAD SEA BREAM *Sparus aurata* JUVENILES
- 15.50 Bjarne Hatlen**, Thomas Larsson, Tone Kari Østbye, Odd Helge Romarheim, Laura Martínez Rubio, Bente Ruyter
IMPROVED FILLET QUALITY IN HARVEST-SIZE ATLANTIC SALMON FED HIGH N-3 CANOLA OIL AS A DHA-SOURCE
- 16.10 Daphne Siciliani**, Gerd M. Berge, Trond M. Kortner, Elin C. Valen, Elvis M. Chikwati, Åshild Krogdahl
EFFECTS OF DIETARY LIPID LEVEL AND ENVIRONMENTAL TEMPERATURE ON THE SEVERITY OF STEATOSIS IN ATLANTIC SALMON FED SUBOPTIMAL LEVEL OF CHOLINE
- 16.30 Alberto Ruiz Hernández**, Karl B. Andree, Dolors Furones, Enric Gisbert
DIETS SUPPLEMENTED WITH BILE SALTS REDUCED BODY ADIPOSITY AND IMPROVED HEALTH CONDITION IN JUVENILE GILTHEAD SEABREAM
- 16.50 Nicole Martins**, Lúcia Vieira, Ana Couto, Cláudia R. Serra, Aires Oliva-Teles, Helena Peres, Carolina Castro
OLEIC ACID DECREASES FEED-INTAKE IN EUROPEAN SEABASS *Dicentrarchus labrax* JUVENILES
- 17.10 Olga Ntantalí**, Emmanouil Malandrakis, Wout Abbink, Eleni Golomazou, John Bastiaansen, Evanthia Chatzoglou, Helen Miliou, Panagiota Panagiotaki
INTERMITTENT FEEDING AND GROWTH OF EUROPEAN SEABASS: INSIGHTS FROM GENE EXPRESSION AND BLOOD BIOCHEMICAL PARAMETERS

SELECTIVE BREEDING

Wednesday, October 6 10.30 - 17.30 Funchal-Hotel

Chairs: Anna Sonesson, Francois Allal

WEDNESDAY

- 10.30 Ana Garcia**, G. Vilella, J. Estêvão, A. Cunha, B. Costas, L. Dégremont, S. Fernandéz-Boo
ANTIMICROBIAL PEPTIDE ANALYSES OF SELECTED AND NAÏVE *Crassostrea gigas* OYSTERS TO *Vibrio aesturianus* PATHOGEN
- 10.50 Mathieu Besson**, D.J. McKenzie, J. Nati, G. Salou, A. Vergnet, J. Brunier, A. Bajek, P. Haffraya, M. Vandeputte, F. Allal
PHENOTYPIC AND GENOMIC CORRELATIONS BETWEEN FEED EFFICIENCY AND METABOLIC TRAITS IN EUROPEAN SEA BASS
- 11.10 Binyam Dagnachew**, Ashie Norris, Anna Sonesson
SELECTIVE GENOTYPING STRATEGIES FOR GENOMIC SELECTION FOR A DISEASE RESISTANCE TRAIT
- 11.30 Smaragda Tsairidou**, Alejandro P. Gutierrez, Christina Kriaridou, Diego Robledo, Ross D. Houston
ASSESSING AND OPTIMIZING GENOTYPE IMPUTATION STRATEGIES IN PACIFIC OYSTER *Crassostrea gigas*
- 11.50 Martin Prchal**, Delphine Lallias, Henri Lagarde, Jonathan D'Ambrosio, Pierre Patrice, Yoannah François, Charles Poncet, Alexandre Desgranges, Pierrick Haffray, Mathilde Dupont-Nivet, Florence Phocas
GENOME-WIDE ASSOCIATION STUDY OF HYPOXIA STRESS TOLERANCE IN RAINBOW TROUT
- 12.10 Ross F. Cairnduff**, Erik Kjærner-Semb, Rolf B. Edvardsen, Per Gunnar Fjellidal, Tom Hansen, Tom Ole Nilsen, Anna Wargelius
FUNCTIONAL GENOMIC ANALYSIS OF LANDLOCKED ATLANTIC SALMON *Salmo salar* POPULATIONS
- 12.30 François Allal**, Mathieu Besson, Bastien Sadoul, François Ruelle, Mako Pegart, Marie-Odile Blanc, Alain Vergnet, Frédéric Clota, Núria Sánchez-Baizán, Francesc Piferrer, Marc Vandeputte, Benjamin Geffroy
GENOMIC PREDICTION AND GENOTYPE-BY-TEMPERATURE INTERACTION OF SEX TENDENCY IN EUROPEAN SEA BASS
- 12.50 LUNCH**
- 14.30 Muhammad Luqman Aslam**, Binyam Sime Dagnachew, Serge Heurtebise, Elise Maurouard, Lionel Degremont, Jean-Baptiste Lamy
GWAS AND ACCURACY OF PREDICTIONS FOR RESISTANCE AGAINST OsHV-1 IN PACIFIC OYSTER *Crassostrea gigas*
- 14.50 Sara Faggion**, Rafaella Franch, Massimiliano Babbucci, Francesco Pascoli, Giulia Dalla Rovere, Lorena Biasini, Silvia Iori, Massimo Caggiano, Hervé Chavanne, Anna Toffan, Paolo Carnier, Luca Bargelloni
GENETIC BASIS OF RESISTANCE TO VIRAL NERVOUS NECROSIS IN GILTHEAD SEA BREAM *Sparus aurata* AT THE LARVAL STAGE
- 15.10 Clemence Frasin**, Antti Kause, Antti Nousiainen, Heikki Koskinen, Ross D. Houston
GENOMIC SELECTION OF RESISTANCE TO *Flavobacterium columnare* IN RAINBOW TROUT USING LOW DENSITY SNP PANELS
- 15.30 Stavroula Oikonomou**, Maria Papapetrou, Zoi Kazlari, Kantham Papanna, Leonidas Papaharis, Tereza Manousaki, Dimitrios Loukovitis, Lefteris Kottaras, Arkadios Dimitroglou, Evgenia Gourzioti, Charalampos Pagonis, Andreas Kostandis, Costas S. Tsigenopoulos, Dimitrios Chatziplis
A GENOME WIDE ASSOCIATION (GWAS) ANALYSIS FOR PARASITE RESISTANCE IN EUROPEAN SEA BASS *Dicentrarchus labrax*

- 15.50 Anastasia Bestin**, Mathieu Besson, Alain Vergnet, François Allal, Frédéric Clota, Sophie Cariou, Jean-Sébastien Bruant, Pierrick Haffray, Marc Vandeputte
GENETIC CORRELATIONS BETWEEN PROCESSING TRAITS AND INDIVIDUAL FEED EFFICIENCY IN A GILTHEAD SEA BREAM *Sparus aurata* COMMERCIAL LINE
- 16.10 Gareth Difford**, Bjarne Hatlen, Bjarne Gjerde, Odd-Helge Romarheim, Grete Baeverfjord, Karsten Heia, Ashie Norris, Anna Sonesson
GENETIC VALIDATION OF THE XRAY METHOD FOR PHENOTYPING FEED INTAKE IN ATLANTIC SALMON
- 16.30 Daniel Montero**, Silvia Torrecillas, Simona Rimoldi, Antonio Serradell, Ramón Fontanillas, Felix Acosta, François Allal, Pierrick Haffray, Aline Bajek, Genciana Terova
NUTRITIONAL INNOVATIONS IN SUPERIOREUROPEAN SEA BASS *Dicentrarchus labrax* GENOTYPES: IMPLICATIONS IN FISH PERFORMANCE AND GUT HEALTH
- 16.50 AshiePanya Norris**, Panya Sae-Lim, Solomon Boison, Serap Gonen, Matthew Baranski, Jørn Åge Stene, Grethe Rosenlund, Bjarne Hatlen, Bente Ruyter, Ramon Fontanillas, Laura Martinez Rubio
PIGMENT QTL GENEOTYPE BY DIET INTERACTION ON GROWTH IN ATLANTIC SALMON *Salmo salar*
- 17.10 Anna Sonesson**, G.F. Difford, B. Ruyter, M.L. Aslam, C. Diaz-Gil, M. López Belluga, M. Herlin, C. Peñaloza, R. Houston, Siri S. Horn
GENETIC PARAMETERS AND GWAS OF LIPID TRAITS IN MUSCLE AND LIVER OF EUROPEAN SEABASS *Dicentrarchus labrax*

EU BLUE INVEST INNOVATION FORUM

Wednesday, October 6 10.30 - 17.30 Mezzanine-Casino

Chair: Catherine Frideres

OPENING SESSION

Moderator: Representative, BlueInvest

Welcome Remarks by

- Lorella De La Cruz, DG MARE, European Commission
- Hervé Migaud, EAS President 2020 -2022

PANEL DISCUSSION: MARKET DEVELOPMENTS, INNOVATION TRENDS AND INVESTMENT OPPORTUNITIES IN SUSTAINABLE AQUACULTURE

This session should provide attending investors and funds with insights on market developments and opportunities, recent innovation trends and the existing funding gap for the sustainable aquaculture sector. It should reflect on the risk and return profile of sustainable aquaculture solutions, as well as feature use cases of projects and financing models with a strong impact potential.

Moderators:

- Hervé Migaud, EAS President 2020 -2022
- Luisa Valente, EAS Board member

Speakers:

- Lorella De La Cruz, DG MARE, European Commission
- David Bassett, Secretary general, EATIP
- Olivier Raybaud, Managing Director, SWEN Capital Partners

11.30 EUROPEAN FUNDING OPPORTUNITIES FOR SUSTAINABLE AQUACULTURE

- Vincent Favrel, Representative, CINEA, European Commission

12.00 NETWORKING LUNCH / 1:1 MATCHMAKING

Attendees to the workshop participate in 1:1 meetings. Those at the event are encouraged to visit the exhibition.

14.30 ESG FOR SUSTAINABLE AQUACULTURE

Training session for impact investors and corporates on integrating ESG frameworks and sustainable financing principles into aquaculture-related investments. Featuring new tools, benchmarks and frameworks.

- Mauro Randone, Regional Manager, WWF Mediterranean

15.00 INVESTOR SPOTLIGHT: FINANCING OPPORTUNITIES FOR SUSTAINABLE AQUACULTURE

Moderated panel format, with Q&A.

Reverse pitches by Aquaculture investors and funds and presentations from EU programmes that finance sustainable aquaculture projects

- Frédéric Fève, Sustainable Impact Ventures / Adrin Wealth Management
- Investor TBC
- Investor TBC

15.30 PITCH SESSION

Up to 5 high potential companies and projects from the aquaculture sector shall be invited to pitch to an audience of investors, venture mentors and coaches.

- Algonomi (Finland)
- AquaBioTech Group (Malta)
- Aquaponics Iberia (Portugal)
- Innovakeme (Portugal)
- Nova Q (Ireland)

LOW TROPIC AQUACULTURE

Wednesday, October 6 10.30 - 17.30 Sidney-Hotel

Chairs: Philip James, Francisco Ruano

CANCELED**10.30 Christina J. Thiele, Malcolm D. Hudson, Antony C. Jensen, Andrea E. Russell**

ASSESSMENT OF MICROPLASTICS REMOVAL IN *Ostrea edulis* L. THROUGH LEGALLY REQUIRED DEPURATION FOR COMMERCIAL SHELLFISH

10.50 Maitane Pérez, Daniel Prieto, Irrintzi Ibarrola, Urtzi Izagirre

HISTOLOGY REVEALS THE TISSUE FACTORS COMPROMISING THE DIFFERENTIAL GROWTH RATE AND PHYSIOLOGICAL PERFORMANCES OF THE MUSSEL *Mytilus galloprovincialis*

11.10 Pernille Nielsen, Clarie Ng, Pascal Barreau, Camille Saurel, Iarfhlaith Connellan, Colin Hannon

DEVELOPMENT OF AN EASY TO OPERATE HATCHERY PROTOCOL FOR BLUE MUSSEL *Mytilus edulis* SEED PRODUCTION

11.30 Diego Castejón Bueno, Natacha Nogueira, Carlos A.P. Andrade

TURN-UP THE SHELL: ADVANCES ON THE PATELLID LIMPETS' AQUACULTURE

- 11.50 Antonio Aguera**, Ramon Filgueira, Peter Cranford, Laura Steeves, Tore Strohmeier, Cathinka Krogness, Øivind Strand
INTERANNUAL VARIATION IN ENERGY CONTENT OF MARINE COSTAL SESTON DETERMINED BY DIRECT CALORIMETRY
- 12.10 Eva Hartog**, Tony van der Hiele, Lotte Niemeijer, Wouter Suykerbuyk, Linda Tonk
OPTIMIZING OFF-BOTTOM OYSTER CULTIVATION IN THE NETHERLANDS: IMPROVING YIELD WITH SITE-SPECIFIC OYSTER FARMING
- 12.30 G.P. Verbeeke**, E.P.A. Merks, L. Sanders, A.C. Lataes, J. van Houcke
OYSTER PRODUCTION IN A MAN-MADE SALTWATER CREEK SYSTEM IN THE NETHERLANDS
- 12.50 LUNCH**
- 14.30 Patricia Diogo**, Gonçalo Bastos, Cristiana Gastão, João Carneiro, Ana Marreiros, Alexandre Rodrigues, António Falcão, Victória del Pino, João Navalho
NEW COMMERCIAL MICROALGAE DIETS FOR BIVALVES APPLIED TO PORTUGUESE OYSTER *Crassostrea angulata*
- 14.50 Philip James**, T. Evensen, C. Hannon, L. Gutiérrez
IMPACT OF TRANSPORT ON SUBSEQUENT ROE ENHANCEMENT OF THE SEA URCHINS *Strongylocentrotus droebachiensis* AND *Paracentrotus lividus*
- 15.10 Inês Garrido**, Tiago Sá, Luís F. Baião, Helena M. Amaro, Tânia Tavares, F. Xavier Malcata, Isabel Costa, A. Catarina Guedes, Luísa M.P. Valente
INCLUSION OF *Dunaliella salina* IN COLD EXTRUDED DIETS RESULTS IN SEA URCHIN GONADS WITH HIGH CONSUMER ACCEPTANCE
- 15.30 CANCELED Mark Cyrus**, Michael Bennett, Brett M. Macey, John J. Bolton, Vernon E. Coyne
THE EFFECT OF SETTLEMENT SUBSTRATES AND FEED ON EARLY STAGE GROWTH OF THE SEA URCHIN *Triploneustes gratilla*: IMPLICATIONS FOR HATCHERY PROTOCOLS AND ECHINOCULTURE DEVELOPMENT
- 15.50 Sonia K.M. Gueroun**, Tatiana M. Torres, Antonina dos Santos, Nuno Vasco-Rodrigues, Raul Gouveia, João Canning-Clode, Carlos Andrade
CULTURE OF *Catostylus tagi*, A NEW EDIBLE JELLYFISH
- 16.10 Natacha Nogueira**, Sonia Gueroun, Paula Canada, Ricardo José, Paolo Guttuso, João Canning-Clode, Carlos Andrade
JELLYFISH: A USEFUL RESOURCE FOR AQUACULTURE
- 16.30 Holger Kühnhold**, Jana Maßig, Andreas Kunzmann, Karin Springer
JELLYFISH AQUACULTURE FOR HUMAN NUTRITION – PROSPECTING AND MANIPULATING LIGHT ACCESSORY PIGMENTS IN THE ENDOSYMBIOTIC JELLYFISH *Cassiopea andromeda*

AQUACULTURE - SOCIAL - SOCIETAL ISSUES

Wednesday, October 6 10.30 - 17.30 View Room-Casino

Chairs: Marija Banovic, Kjell Naas

- 10.30 Audun Iversen**, Andreea Laura Cojocaru, Ole Bergesen, Ragnar Tveterås
DIFFERENTIATION AND INNOVATION IN NORWEGIAN SALMON AQUACULTURE: BARRIERS AND OPPORTUNITIES
- 10.50 Ragnar Tveterås**, Dagim G. Belay, Tenaw G. Abate
GROUP REGULATION AND ENVIRONMENTAL OUTCOME: EVIDENCE FROM ZONAL OUTPUT RESTRICTION IN NORWEGIAN AQUACULTURE
- 11.10 José L. Fernández Sánchez**, José M. Fernández-Polanco, Ignacio Llorente, Manuel Luna, Elisa Baraibar-Diez, María D. Odriozola-Zamanillo, Ladislao Luna Sotorrío
ECONOMIC IMPACT OF KEY OPERATIONAL FACTORS IN THE EUROPEAN INDUSTRY OF SEA BASS AND SEA BREAM FARMING
- 11.30 Yuliia Buhlak**, Patrice Guillotreau, Thomas Vallee, Veronique le Bihan, John A. Theodorou
MULTIDIMENSIONAL AQUACULTURE INVESTOR INDEX: BLACK SEA RIPARIAN COUNTRIES
- 11.50 Pascal Raux**, José Antonio Pérez Agúndez
IS BLUE GROWTH A DRIVER OR A CONSTRAINT TO THE SUSTAINABILITY OF MARINE AQUACULTURE DEVELOPMENTS? REVIEWS OF BOTTLENECKS AND LESSONS FROM PAST DEVELOPMENTS
- 12.10 Marit S. Olsen**, Tonje Osmundsen, Asle Gauteplass, Frank Asche
A SLIPPERY SLOPE FOR AQUACULTURE REGULATION: DEVELOPMENT LICENCES AS A POLICY INSTRUMENT
- 12.30 Tonje C. Osmundsen**, Marit Schei Olsen, Vilde Steiro Amundsen, Karen A. Alexander, Maria Wilke, Ragnheidur Thorarinsdottir
SOCIAL LICENSE FOR AQUACULTURE PRODUCTION - PUBLIC SKEPTICISM OR APPRAISAL?
- 12.50 Brett Koonse**
GOOD AQUACULTURE PRACTICES; THE COLLABORATIVE USE AND BENEFITS
- 13.10 LUNCH**
- 14.30 Katia Frangoudes**, Alexis Conides
LEARNING FROM THE DEVELOPMENT OF MARICULTURE IN GREECE
- 14.50 Ana Roque**, Maria Filipa Castanheira, Anna Toffan, Pablo Arechavala-López, Edgar Brun, Morris Vilarroel, Enric Gisbert, Constantinos Mylonas, Ana Muniesa, Alicia Estevez, Antoni Dalmau, Bernardo Basurco
PROPOSAL FOR A GILTHEAD SEABREAM CERTIFICATION SCHEME
- 15.10 Javier Cantillo**, Juan Carlos Martín, Concepción Román
UNDERSTANDING THE PUBLIC IMAGE OF AQUACULTURE AND ITS PRODUCTS: DOES THE INFLUENCE OF POSITIVE OR NEGATIVE WORDING MATTER? DO THE OPINIONS VARY AMONGST DIFFERENT SEGMENTS? - AN APPLICATION TO THE ISLAND OF GRAN CANARIA
- 15.30 Laura López-Mas**, Anna Claret, Gaëlle Arvisenet, Roser Romero del Castillo, Zein Kallas, Massimo Zuccaro, Xavier Durany, Luis Guerrero
CONSUMERS' PERCEPTION OF NEW AQUACULTURE TECHNOLOGIES

- 15.50 Sonia García Muñoz**, Raquel Llorente, Irene Peral
WHAT ARE THE MOST IMPORTANT DRIVERS FOR BUYING NEW AQUACULTURE FISH PRODUCTS? THE CASE OF FRENCH AND GERMAN CONSUMERS
- 16.10 Jorge Freitas**, Pedro Silva, Rosa Perestrelo, Paulo Vaz-Pires, José S. Câmara
MASS FINGERPRINT-BASED APPROACH FOR ORIGIN DISCRIMINATION OF MADEIRA AQUACULTURED *Sparus aurata*
- 16.30 Ricardo Calado**, Renato Mamede, Andreia Santos, Diana Gonçalves, Maria do Rosário Domingues, Ana I. Lillebo, Pedro Domingues, Sónia Cruz, Felisa Rey, Paulo Cartaxana, Elisabete da Costa, Bruna Marques, Carla Patinha, Eduardo Ferreira da Silva, Fernando Ricardo
TRACEABILITY TOOLS TO VERIFY THE GEOGRAPHIC ORIGIN OF AQUACULTURE PRODUCTS: FOSTERING ORIGIN CERTIFICATION AND FIGHTING FRAUDULENT PRACTICES
- 16.50 Evanthia Chatzoglou**, Nefeli Tsaousi, George Triantaphyllidis, Emmanouil Malandrakis, Helen Miliou
THE USE OF COMPLETE mtDNA OF THE RED PORGY *Pagrus pagrus* AS A MOLECULAR TOOL TOWARDS FISH AUTHENTICITY
- 17.10 Saioa Ramos**, Maite Ciudad, Lohitzune Larrinaga, Miguel Angel Cuevas
NEW TOOL FOR ENVIRONMENTAL FOOTPRINT CALCULATION OF THE MEDITERRANEAN AQUACULTURE PRODUCTS

TILAPIA: FISH FOR THE FUTURE?

Wednesday, October 6 14.30 - 17.30 Berlim-Hotel

Chairs: Johan Verreth, Mike Phillips

This workshop will take a close look at the global tilapia farming industry and its challenge to produce healthy and sustainable food for the future. It will feature three key areas of research and innovation of global significance from the CGIAR Research Program on FISH, a program directed by Dr Michael Phillips of Worldfish, in partnership with Wageningen UR, James Cook University and the Natural Resources Institute (Greenwich University).

Panel based discussions on FISH innovations and the consequences of those innovations will be introduced by an introductory presentation and then further developed by the panelists. The discussion will be global, with a vision where European stakeholders can benefit from or participate in an industry where trade and consumption is global, even though much production is focused on the global South. Cooperation between these regions will be explored, for example how feed companies, breeding companies and veterinary services from the North can assist with and support the industry and farmers in the South.

The session will be introduced by Dr Michael Phillips (Director, CGIAR Research Program on FISH) and Professor Johan Verreth (WUR), to be followed by three panel sessions.

- 1. Genetic innovations:** covering genomics, resilient fish and tools for producing improved tilapia seed.
- 2. Feed and Health:** managing TiV and biosecurity risks and sustainable feeds for healthy and productive tilapia farming.
- 3. Performance and sustainability:** understanding future markets, technology delivery and performance benchmarking to address yield gaps, and ensure climate resilience and sustainability.

DISEASES - CONTROL / PREVENTION / PROPHYLACTICS

Wednesday, October 6 14.30 - 17.30 Caracas - 4th Floor

Chairs: Geert Wiegertjes, Kim Thompson

- 14.30 Peter Bossier**, Vikash Kumar, Mathieu Wille, Tania Margarida Lourenço
BIOFLOC-BASED PHENOTYPE SWITCHING IN *Vibrio parahaemolyticus* PROTECTS AGAINST AHPND IN SHRIMP
- 14.50 João Estêvão**, Hugo Osorio, Benjamin Costas, Andreia Cruz, Sergio Fernández-Boo
SEARCH FOR BIOMARKERS OF RESISTANCE IN *Ruditapes decussatus* TO *Perkinsus olseni* PARASITE INFECTION
- 15.10 Carolina Barroso**, P. Carvalho, J.F.M. Gonçalves, P.N.S. Rodrigues, J.V. Neves
THE POTENTIAL OF SEA BASS *Dicentrarchus labrax* DERIVED HEPCIDINS IN THE TREATMENT OF IRON DISORDERS AND BACTERIAL INFECTIONS
- 15.30 Sergio Fernández-Boo**, Ana García, João Estêvão, Benjamin Costas, Andreia Cruz
ANALYSIS OF THE MAIN IMMUNE GENE BIOMARKERS IN *Ruditapes decussatus* AFTER EXPERIMENTAL INFECTION BY *Perkinsus olseni*
- 15.50 Ariadna Sitjà-Bobadilla**, F.E. Montero, I. Estensoro, L. Leria, M. Villora-Montero, E. Planas Callao, A. Mohanpersad, M. Riutort
A NEW TURBELLARIAN PARASITE INFLECTING SERIOUS MORTALITIES IN RED DRUM AQUACULTURE
- 16.10 Luca Peruzza**, Francesco Pascoli, Giulia Dalla Rovere, Rafaella Franch, Serena Ferraresso, Massimiliano Babbucci, Lorena Biasini, Miriam Abbadi, Valentina Panzarin, Anna Toffan, Luca Bargelloni
COMPARATIVE TRANSCRIPTOMICS OF SUSCEPTIBLE AND RESISTANT NNV-INFECTED GILT HEAD SEA BREAM LARVAL STAGES REVEALS THE PUTATIVE MOLECULAR MECHANISMS OF TOLERANCE TO NNV INFECTION
- 16.30 Oswaldo Palenzuela**, Alastair Cook, Raquel del Pozo, Ivona Mladineo, Jerko Hravar, Monica Caffara, Letizia Fioravanti, Paola Beraldo, Panos Christofilogiannis, Daniel Gijón, Ioannis Petropoulos, Ariadna Sitjà-Bobadilla
Enteromyxum leei IN MEDITERRANEAN GILT HEAD SEA BREAM FARMS: HOW MUCH IS OUT THERE?
- 16.50 Joana P. Firmino**, Jorge Galindo-Villegas, Felipe E. Reyes-López, Enric Gisbert
PHYTOGENIC BIOACTIVE COMPOUNDS SHAPE FISH MUCOSAL IMMUNITY
- 17.10 João F. Romero**, Ian Gardner, Sonja Saksida, Derek Price, Kyle Garver, Krishna Thakur
EPIDEMIOLOGICAL MODELLING OF WATERBORNE SPREAD OF INFECTIOUS HEMATOPOIETIC NECROSIS VIRUS IN FARMED SALMON POPULATIONS

NOVEL INGREDIENTS, FEEDS AND FEEDING

Wednesday, October 6 14.30 - 17.30 Congress Hall

Chairs: Johan Schrama, Katerina Kousoulaki

- 14.30 Jessica Petereit**, Christina Hoerterer, Adrian A. Bischoff, Luis D. Conceição, Roberto Pastres, Bela H. Buck
THE EFFECT OF ALTERNATIVE FEED INGREDIENTS ON GROWTH AND STRESS RESPONSE OF EUROPEAN SEABASS *Dicentrarchus labrax* KEPT IN RECIRCULATING AQUACULTURE SYSTEMS
- 14.50 Anna Tampou**, S. Andreopoulou, I. Nengas, A. Vasilaki, I.T. Karapanagiotidis, E. Mente
GROWTH PERFORMANCE OF GILT HEAD SEABREAM *Sparus aurata* FED LOW FISHMEAL ORGANIC DIETS

WEDNESDAY

CANCELED

- 15.10 Gabriella do Vale Pereira**, Ana Margarida Fernandes, B. Silva, Jorge Dias, Bela Buck, Johan Johansen, Luis Conceição, Josep Calduch-Giner, Jaume Pérez-Sánchez
GROWTH PERFORMANCE AND LIVER GENE EXPRESSION IN SEABREAM *Sparus aurata* FED ECO-EFFICIENT AQUAFEEDS
- 15.30 Katerina Kousoulaki**, Lene Sveen
PERFORMANCE OF NOVEL LOW TROPHIC RAW MATERIALS IN ATLANTIC SALMON *Salmo salar* DIETS
- 15.50 Ana Margarida Fernandes**, Luis E.C. Conceição, Josep A. Calduch-Giner, Gabriella V. Pereira, Giulia Micallef, Prabhugouda Siriappagoudar, Brett D. Glencross, Fernando Naya-Català, M. Carla Piazzon, Ariadna Sitjà-Bobadilla, Johan Johansen, Jaume Pérez-Sánchez, Jorge M.O. Fernandes
HOW DO NOVEL FEED FORMULATIONS AFFECT GROWTH PERFORMANCE, OXIDATIVE STRESS AND IMMUNE RESPONSE OF ATLANTIC SALMON?
- 16.10 Enric Gisbert**, Antoni Ibarz, Joana P. Firmino, Laura Fernández-Alacid, Eva Vallejos-Vidal, Ricardo H. Salomón, Javier Polo, Ignasi Sanahuja, Lluís Tort, Felipe E. Reyes-López, Karl B. Andree
PORCINE PROTEIN HYDROLYSATES PROMOTE GROWTH AND ENHANCES SYSTEMIC IMMUNITY IN GILT HEAD SEABREAM FED LOW FISHMEAL DIETS
- 16.30 Jeleel Opeyemi Agboola**, Byron Morales-Lange, Jon Øvrum Hansen, Liv Torunn Mydland, Margareth Øverland
YEAST AS A PROTEIN SOURCE WITH HEALTH BENEFICIAL EFFECTS IN DIETS FOR ATLANTIC SALMON *Salmo salar*
- 16.50 Sandrine Skiba-Cassy**, Emilien Segret, Yoann Cachelou, Thibaud Vanderesse, Simon Lecou, Claude Coigdarrippe, Marco Rul, Laurence Larroquet, Alexandre Hermann, Anne Surget, Frédéric Cachelou, Julien Bobe, Emilie Cardona
IMPACT OF SUPPLEMENTATION OF MICRO ALGAE *Schizochytrium* sp. IN PLANT DIET ON REPRODUCTION OF FEMALE RAINBOW TROUT *Onchorhynchus mykiss* AND CONSEQUENCES ON PROGENY
- 17.10 Maite Ciudad**, Saíoa Ramos, Bruno Iñarra, Luis Padrell, Alicia Estévez, David San Martín
TOWARDS SUSTAINABLE AQUACULTURE FEEDS USING BREWERS' BY-PRODUCTS

HATCHERY TECHNOLOGIES

Wednesday, October 6 14.30 - 17.30 Lisboa-Hotel
Chairs: Sofia Engrola, Luis Sampaio, Nikos Papandoulakis

- 14.30 Luis Andre Sampaio**, Joana Sgandella, Lucas Maltez, Marcelo Hideo Okamoto, Olivia Menossi, Thiago P.A.P. Oliveira, Ricardo Vieira Rodrigues
REPRODUCTION AND LARVICULTURE OF THE SOUTHERN BLACK DRUM *Pogonias courbina*, A NEW SPECIES FOR AQUACULTURE IN SOUTH AMERICA
- 14.50 Cátia Marques**, Ana Candeias-Mendes, Sara Castanho, Marisa Barata, Sara Sousa e Brito, Margarida Gamboa, Leticia Luján, Florbela Soares, Laura Ribeiro, Ana C. Matias, Pedro Pousão-Ferreira
ADVANCES ON MEAGRE *Argyrosomus regius* REARING: TEMPERATURE VS. PROTEIN, WHICH IS MORE IMPORTANT?
- 15.10 Giulia Franchi**, T. De Wolf, V. Carbone, S. Lenzi, D. Troiano, S. Debono, J. Teske, G. Rombaut
IMPROVEMENT OF LARVAL REARING PROTOCOLS FOR SEABASS *Dicentrarchus labrax* THROUGH THE EARLY INTRODUCTION OF A DRY DIET, IMPROVING SURVIVAL RATES, GROWTH AND FRY QUALITY

- 15.30 Wilson Pinto**, Maria Morais, Inês Quintino, Sofia Engrola, Luís E.C. Conceição
IMPROVING MICRODIET FORMULATIONS FOR LARVAE OF TWO FLATFISH SPECIES: SENEGALESE SOLE AND TURBOT
- 15.50 Nafsika Karakatsouli**, Alkisti Batzina, Kostas Ntomalis, Anemos Katelis, Vasiliki-Anna Alexopoulou, Sofia-Brinkmann Bougali, Isidoros Markakis
INTRODUCING DRY FEED FROM MOUTH OPENING IN RED SEABREAM *Pagrus major* LARVAE PROMOTES LARVAE AND POST-LARVAE PERFORMANCE
- 16.10 Maria J. Xavier**, Luís E.C. Conceição, Luisa M.P. Valente, Sofia Engrola
DIETARY CURCUMIN MODULATES DIGESTIVE CAPACITY AND OXIDATIVE STATUS IN DIFFERENT LARVAE STAGES OF GILTHEAD SEABREAM
- 16.30 João Henriques**, Maria Morais, Wilson Pinto, Maria J. Xavier, Sofia Engrola, Benjamin Costas, Jorge Dias, Luís Conceição
IMPROVING PERFORMANCE OF SENEGALESE SOLE THROUGH DIET SUPPLEMENTATION WITH CURCUMIN EXTRACT
- 16.50 Alessio Carletti**, Joana T. Rosa, Katia Pes, Sofia Engrola, Ventura Serra, Rita Colen, M. Leonor Cancela, Vincent Laizé, Paulo J. Gavaia
EFFECT OF DIETARY SUPPLEMENTATION OF MICROALGAE EXTRACTS ON THE SKELETAL HEALTH OF ZEBRAFISH *Danio rerio* AND GILTHEAD SEABREAM *Sparus aurata* LARVAL STAGES: A COMPARATIVE STUDY
- 17.10 Ana Teresa Gonçalves**, Wilson Pinto, Diogo Peixoto, Daniel Afonso, Benjamin Costas, Maria Morais, Helena Abreu, Joana Silva, João Navalho, Ana Mendes, Sara Castanho, Cátia Marques, Rita Colen, Pedro Pousão-Ferreira, Sofia Engrola, Jorge Dias, Luis Conceição
IMMUNOMODULATION OF SENEGALESE SOLE *Solea senegalensis* POST-LARVAE BY ALGAE BLENDS AS FUNCTIONAL INGREDIENTS IN MICRODIETS

THURSDAY, October 7

BASIC ASPECTS OF AQUACULTURE

Thursday, October 7 09.00 - 11.40 Caracas 4th Floor

Chair: Ariadna Sitjà-Bobadilla

- 09.00 Anna Wargelius**, Hilal Güralp, Kai Ove Skaftnesmo, Erik Kjærner-Semb, Fernanda Almeida, Anne Hege Straume, Rüdiger W. Schulz, Eva Andersson, Per Gunnar Fjellidal, Lene Kleppe, Rolf B. Edvardsen, Anna Wargelius
VIRGIN SALMON- BROODSTOCK CARRYING STERILITY TO NEXT GENERATION
- 09.20 Cláudia R. Serra**, Rafaela A. Santos, Marta Monteiro, Laura Gasco, Francesco Gai, Aires Oliva-Teles, Paula Enes, Fábio Rangel
ISOLATION OF PUTATIVE PROBIOTICS WITH CHITIN-METABOLIZING ABILITIES FROM EUROPEAN SEA BASS *Dicentrarchus labrax* GUT MICROBIOTA
- 09.40 Charlotte Bolton**, Mariann Eilertsen, Michaël Bekaert, Rita Karlsen, David Dolan, John Taylor, Jon Vidar Helvik, Herve Migaud
NEW INSIGHTS INTO CLOCK GENES AND THE CIRCADIAN SYSTEM IN SALMONIDS
- 10.00 Marc Vandeputte**, Charles Rodde, Trong Q. Trinh, John A.H. Benzie, Hugues de Verdal
PREDICTING FEED CONVERSION RATIO AT COMMERCIAL SIZE FROM JUVENILE PERFORMANCE IN INDIVIDUALLY REARED *Oreochromis niloticus*
- 10.20 Kaja H. Skjærven**, Anne-Catrin Adam, Takaya Saito, Paul Whatmore, Audrey L.K. Putman, Jorge M.O. Fernandes, Vibeke Vikeså, Marit Espe
EPIGENETIC MECHANISMS OF IMPROVED POST-SMOLT GROWTH IN ATLANTIC SALMON FED A MODERATE SURPLUS PACKAGE OF METHIONINE, FOLIC ACID, VITAMIN B6 AND B12 THROUGHOUT SMOLTIFICATION
- 10.40 Chantal Roozeboom**, Antti Kause, Mark Camara, Hans Komen, John W.M. Bastiaansen
OPTIMIZING A RAINBOW TROUT BREEDING PROGRAM WITH GENOMIC SELECTION
- 11.00 Costas Tsigenopoulos**, Vasileios Papadogiannis, Tereza Manousaki, Jon Kristoffersen, Alexandros Tsakogiannis, Orestis Nousias, Constantinos C. Mylonas, Dimitrios Chatziplis, Costas Batargias
THE FIRST COMPLETE GENOME ASSEMBLY FOR THE MEAGRE *Argyrosomus regius*
- 11.20 Karin Schiefenhövel**, Melanie Schiffer-Harms, Wolfgang Schatton, Matthew J. Slater, Joachim Henjes
EX SITU CULTIVATION OF THE MARINE SPONGE *Chondrosia reniformis* IN NOVEL LAND-BASED AQUACULTURE FOR BIOMASS AND COLLAGEN PRODUCTION
- 11:45 PLENARY 3**, PORTUGUESE MINISTER OF THE SEA AND POSTER AWARDS
- 12:50 LUNCH**

OPEN OCEAN AQUACULTURE

Thursday, October 7 09.00 - 11.40 Berlim-Hotel

Chairs: Bela Buck, Pedro Pousão

09.00 **Eva Strothotte**, M. Jaeger, J. Pforth, I. Drigkopoulou, E. Brouwers, N. Nevejan, A. Declercq, H.C. Sørensen, G. El Serafy
LESSONS LEARNED FROM STARTING AN INTEGRATED OFFSHORE AQUACULTURE-WINDFARM PROJECT IN TIMES OF A PANDEMIC – THE GERMAN NORTH SEA PILOT

CANCELED **09.20** **Jonathan Demmer**, Simon P. Neill, Matthew Lewis
A NUMERICAL STUDY OF SHELLFISHERIES AQUACULTURE AND OFFSHORE RENEWABLE ENERGY CO-LOCATION IN THE IRISH SEA

CANCELED **09.40** **Michael O'Shea**
MODELLING RENEWABLE POWER GENERATION CAPABILITY OF A NOVEL OFFSHORE AQUACULTURE SYSTEM

THURSDAY **10.00** **Carla Filipa Gomes**, José Sardinha, Barbara Marques, Emanuel Fernandes, Abílio Ferreira, Miguel Caetano, António Torres Marques, João Bordado
PILOT CAGE FOR OFFSHORE FISH FARMING

10.20 **Ajie B.K. Pribadi**, Gael Verao Fernandez, Annelies M. Declercq, Brecht Stechele, Nancy Nevejan, Bert Groenendaal, Stephanie Debels, Daan Delbare, Dirk Vandercammen, Simon Petit, Thomas Kerkhove, Jan Vanaverbeke, Steven Degraer, Evert Lataire
OYSTER LONGLINE DESIGN OPTIMIZATION: AQUACULTURE PILOT STUDY IN THE BELGIAN PART OF THE NORTH SEA

10.40 **Abilio Ferreira**, Maria Ferreira, Carlos Navarro, Carlos Andrade
DESIGN AND ENGINEERING CONSIDERATIONS TO SELECT MOST SUITABLE FISHFARMING SYSTEM TO MATCH AN OCEANIC WIND FARM MULTI-USE PLATFORM

CANCELED **11.00** **Matt Lewis**, Peter Robins, David Christie, Jonathan Demmer, Simon Neill
WHAT DRIVES UNCERTAINTY IN MAPPING OFFSHORE AQUACULTURE POTENTIAL?

11.20 **Langley Gace**
HOW MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE HAVE SIGNIFICANTLY IMPROVED OPEN OCEAN FISH FARMING

11:45 **PLENARY 3**, PORTUGUESE MINISTER OF THE SEA AND POSTER AWARDS

12:50 **LUNCH**

SELECTIVE BREEDING - CONTINUED

Thursday, October 7 09.00 - 11.40 Funchal-Hotel

Chair: John Bastiaansen

- 09.00 Anne Kettunen**, Øyvind J. Hansen, Velmurugu Puvanendran
GENETIC PARAMETERS FOR CARCASS COMPOSITION OF ATLANTIC COD *Gadus morhua* AFTER FOUR GENERATIONS OF SELECTIVE BREEDING
- 09.20 Marie Lillehammer**, Rama Bangera, Marcela Salazar, Sergio Vela-Avitua, Edna Erazo, Andres Zuares, James Cock, Morten Rye, Nicholas Robinson
ONE GENERATION OF GENOMIC SELECTION IMPROVES WHITE SPOT SYNDROME VIRUS (WSSV) RESISTANCE IN *Litopenaeus vannamei* SHRIMP
- 09.40 Minh Hai Dao**, Thuy Yen Duong, Quang Hieu Dang, Patrick Kestemont, Thanh Phuong Nguyen, Frédéric Farnir
SELECTION FOR ADAPTATION TO SALINE STRESS OF STRIPED CATFISH *Pangasianodon hypophthalmus*: TOWARDS SUSTAINABLE CATFISH FARMING IN MEKONG DELTA, VIET NAM UNDER EFFECT OF CLIMATE CHANGE
- 10.00 Martin Kocour**, Jinfeng Zhao, Martin Prchal, Christoph Steinbach, Jiří Kříš'an, David Gela, Hana Kocour Kroupová, Oleksandr Malinovskyi, Tomáš Policar
THE WAY TO SHORTEN THE GENERATION INTERVAL IN SELECTION PROGRAM OF COMMON CARP REARED UNDER TEMPERATE CLIMATE
- 10.20 Xiaofei Yu**, Hendrik-Jan Megens, John W.M. Bastiaansen, Langqing Liu, Martien A.M. Groenen, Hans Komen
GENOMIC SELECTION AND INTROGRESSION SIGNATURES RESULTING FROM ADAPTATION TO HIGH SALINITY: A CASE STUDY ON AN INDONESIAN FARMED TILAPIA (SUKAMANDI) STRAIN
- 10.40 Alejandro Gutierrez**, Michaël Bekaert, Herve Migaud, Thomas Cavois-Rogacki, Andrew Davie
DEVELOPMENT OF GENOMIC MARKERS ASSOCIATED TO PRODUCTION TRAITS IN LUMPFISH *Cyclopterus lumpus*
- 11.00 Muhammad Hunaina Fariduddin Aththar**, Priadi Setyawan, John Bastiaansen, Mark Camara, Hans Komen
GENETIC PARAMETERS OF REPRODUCTIVE TRAITS FOR TILAPIA *Oreochromis niloticus* IN BRACKISH WATER AND FRESHWATER
- 11.20 Khrystyna Kurta**, Henrik Jeuthe, Fernando A. Lopes Pinto, Dirk-Jan de Koning, Christos Palaiokostas
A GENETIC BASIS OF REPRODUCTIVE PERFORMANCE IN SELECTIVELY BRED ARCTIC CHARR *Salvelinus alpinus*
- 11:45 PLENARY 3**, PORTUGUESE MINISTER OF THE SEA AND POSTER AWARDS
- 12:50 LUNCH**

THURSDAY

NOVEL INGREDIENTS, FEEDS AND FEEDING - CONTINUED

Thursday, October 7 09.00 - 17.30 Congress Hall

Chairs: Johan Schrama, Katerina Kousoulaki

- 09.00** **Silvia Torrecillas**, Daniel Montero, Marta Carvalho, Tibiabin Benitez-Santana, Marisol Izquierdo
REPLACEMENT OF FISH MEAL BY ANTARCTIC KRILL MEAL IN DIETS FOR EUROPEAN SEA BASS
Dicentrarchus labrax: GROWTH PERFORMANCE, FEED UTILIZATION AND LIVER LIPID METABOLISM
- 09.20** **Marit A.J. Nederlof**, Fariz K. Harwinda, Remon van Ginkel, Johan W. Schrama
EFFECT OF DIFFERENT TYPES OF SINGLE CELL PROTEIN ON FEED INTAKE, GROWTH, BODY COMPOSITION
AND DIGESTIBILITY OF WHITELEG SHRIMP *Litopenaeus vannamei*
- 09.40** **Jan Mazurkiewicz**, Marcin Wisniewski, Mateusz Rawski, Natalia Homska, Grzegorz Kujawa
INSECT MEALS AS INNOVATIVE FEED COMPONENTS IN JUVENILE IDE *Leuciscus idus* NUTRITION
- 10.00** **Pabodha Weththasinghe**, Jon Øvrum Hansen, Sérgio D.C. Rocha, Mateusz Rawski, Damian Józefiak,
Leidy Lagos, Byron Morales-Lange, Margareth Øverland
FULL-FAT MEAL AND FRACTIONS OF BLACK SOLDIER FLY *Hermetia illucens* LARVAE IN DIETS FOR ATLANTIC
SALMON *Salmo salar*: EFFECTS ON NUTRIENT DIGESTIBILITY, GROWTH PERFORMANCE AND GUT HEALTH
- 10.20** **Ana Basto**, Alexandra Marques, Andreia Silva, Tiago Sá, M. Beatriz P.P. Oliveira, Vera Sousa,
Elisabete Matos, Luisa M.P. Valente
DEFATTED *Tenebrio molitor* CAN FULLY REPLACE FISH MEAL IN DIETS FOR MARKET-SIZED EUROPEAN SEA
BASS STILL ASSURING MUSCLE SENSORY ATTRIBUTES AND THE RECOMMENDED LEVEL OF EPA + DHA FOR
HUMAN CONSUMPTION
- 10.40** **Inger Beate Standal**, Revilija Mozuraityte, Rasa Slizyte
STABILISATION OF POLYCHAETE *Nereis virens* BIOMASS DURING FROZEN STORAGE
- 11.00** **Monika Weiss**, Sinem Zeytin, Vanessa Fuchs, Christina Hörterer
INCREASING COMPETITIVENESS OF SWEET LUPINE AND FABA BEAN IN FEED VALUE CHAINS IN EUROPE
- 11.20** **Apriana Vinasyam**, Kazi A. Kabir, Julie Ekasari, Johan W. Schrama, Johan A.J. Verreth, Marc C.J. Verdegem
DIETARY SUPPLEMENTATION OF NON-STARCH POLYSACCHARIDES AFFECTS DIGESTIBILITY AND GROWTH
OF PACIFIC WHITE SHRIMP *Litopenaeus vannamei* IN BIOFLOC AND RAS SYSTEMS
- 11:45** **PLENARY 3**, PORTUGUESE MINISTER OF THE SEA AND POSTER AWARDS
- 12:50** **LUNCH**
- 14.30** **Matthijs de Jong**, Kim Wilson, Orapint Jintasataporn, Arno van der Aa
APPLICATION OF GARLIC AND CINNAMON COMPOUNDS ON GROWTH PERFORMANCE AND IMMUNE
PARAMETERS OF WHITELEG SHRIMP *Litopenaeus vannamei*
- 14.50** **Paraskevi Koletsis**, Geert F. Wiegertjes, Philip Lyons, Johan W. Schrama
TIME- AND DOSE-DEPENDENT EFFECTS OF DIETARY DEOXYNIVALENOL (DON) IN RAINBOW TROUT
Oncorhynchus mykiss
- 15.10** **Ricardo Salomón**, Felipe E. Reyes-López, Lluís Tort, Joana P. Firmino, José C. Quintela,
José M. Pinillas-Rosas, M. Angeles Esteban, Cristóbal Espinoza Ruíz, M. Dolors Furones, Eva Vallejos-Vidal,
Enric Gisbert
ENHANCED SYSTEMIC IMMUNE RESPONSE IN ATLANTIC SALMON *Salmo salar* FED WITH OLIVE FRUIT
EXTRACT-SUPPLEMENTED DIET

- 15.30 Helena Fernandes**, Carolina Castro, Isa Quinzico, José Salgado, Francisco Moyano, Patrícia Ferreira, Aires Oliva-Teles, Isabel Belo, Helena Peres
ZOOTECNICAL PERFORMANCE OF EUROPEAN SEABASS *Dicentrarchus labrax* FED PLANT-FEEDSTUFFS-BASED DIETS PRE-TREATED WITH CARBOHYDRASES PRODUCED BY SOLID-STATE FERMENTATION OF BREWER'S SPENT GRAIN
- 15.50 Marialena Kokkali**, Jens-Erik Dessen, Thomas Larsson, Lene Sveen, Elin Kvamme, Katerina Kousoulaki
COMPARISON OF LAB SCALE AND COMMERCIAL PRODUCTION RESEARCH RESULTS IN SALMON FED DIETS WITH DIFFERENT LEVELS AND TYPES OF TRACE MINERALS
- 16.10 Ashild Krogdahl**, Elvis Chikwati, Aleksei Krasnov, Alexander Jaramillo Torres, Gerd Marit Berge, Paul Midtlyng, Marie Hillestad, Erling Olaf Koppang, Øystein Sæle, Søren Balling Engelsen, Trond Moksnes Kortner
GUT HEALTH EFFECTS IN ATLANTIC SALMON *Salmo salar* L. OF LOW DIETARY FISH MEAL LEVEL CAN BE LIMITED BY DIETARY SUPPLEMENTS
- 16.30 Asma Chaabani**, Laurent Labonne, Vanessa Durrieu, Antoine Rouilly, Fabien Skiba, Philippe Evon
OPTIMIZATION OF VACUUM COATING CONDITIONS TO IMPROVE OIL RETENTION IN TROUT FEED
- 16.50 Endre Lygre**, Ana S. Gomes, Ole-Kristian Hess-Erga, Birgitta Norberg, Jonatan Nilsson, Prescilla Perrichon, Ivar Rønnestad
GASTRIC EVACUATION IN THREE SIZES OF GROW-OUT ATLANTIC HALIBUT *Hippoglossus hippoglossus* FED DIFFERENT PELLETS SIZES
- 17.10 Wilson Wasielesky**, Elisa Prates, Mariana Holanda, Jose Maria Monserrat
EVALUATION OF THE EFFECT OF TEMPERATURE AND FOOD RESTRICTION ON COMPENSATORY GROWTH OF PACIFIC WHITE SHRIMP *Litopenaeus vannamei* IN BIOFLOC SYSTEM

DISEASES - CONTROL / PREVENTION / PROPHYLACTICS - CONTINUED

Thursday, October 7 09.00 - 17.30 Congress Hall

Chair: Geert Wiegertjes, Kim Thompson

- 09.00 Marina Machado**, Francisco Cruz, Sergio Fernández-Boo, Lourenço Ramos-Pinto, Adriana Laranjeira, Renata Serradeiro, Rui Rocha, Jorge Dias, Benjamín Costas
HEALTH PROMOTING EFFECTS OF *Salicornia ramosissima* BIOMASS IN DIETS FOR EUROPEAN SEABASS *Dicentrarchus labrax*
- 09.20 Carolina Tafalla**, Rocio Simón, Alba Martín-Martín, Esther Morel, Patricia Díaz-Rosales
B CELLS FROM THE RAINBOW TROUT ADIPOSE TISSUE SPECIFICALLY RESPOND TO PERITONEAL ANTIGENS
- 09.40 Paulo Santos**, Diogo Peixoto, Inês A. Ferreira, Ricardo Passos, Pedro Pires, Teresa Baptista, Benjamin Costas
SHORT-TERM IMMUNE RESPONSES OF GILTHEAD SEABREAM *Sparus aurata* JUVENILES FOLLOWING *Photobacterium damsela* subsp. *piscicida* INFECTION
- 10.00 Inês A. Ferreira**, Paulo Santos, Marina Machado, Francisco A. Guardiola, Ana do Vale, Benjamín Costas
DIFFERENTIAL LOCAL AND SYSTEMIC IMMUNE RESPONSES IN EUROPEAN SEABASS *Dicentrarchus labrax* FOLLOWING *Tenacibaculum maritimum* INFECTION
- 10.20 Luca Bargelloni**, Luca Peruzza, Francesco Pascoli, Serena Ferraresso, Rafaella Franch, Massimiliano Babbucci, Giulia Dalla Rovere, Matteo Freguglia, Roberto Menegatti, Lorena Biasini, Anna Toffan, Daniela Bertotto
TIME-COURSE RNA-SEQ ANALYSIS OF BRAIN AND HEAD KIDNEY RESPONSE TO NERVOUS NECROSIS VIRUS INFECTION IN THE EUROPEAN SEA BASS

- 10.40 Cláudia R. Serra**, Gabriela Gonçalves, Rafaela A. Santos, António P. Carvalho, Marina Machado, Benjamín Costas, Lourenço Bonneville, Mónica Serrano, Ana Couto, Carolina Tafalla, Patricia Díaz-Rosales, Filipe Coutinho, Aires Oliva-Teles
Bacillus subtilis SPORES ARE EFFICIENT VEHICLES FOR ORAL VACCINATION OF FISH AGAINST VIBRIOSIS
- 11.00 Cláudia R. Serra**, Filipe Coutinho, Jorge M. Cardoso, Steeve Lima, Gabriela Gonçalves, Lourenço Bonneville, Mónica Serrano, Aires Oliva-Teles, Paula Tamagnini, Paulo Oliveira
EVALUATION OF CYANOBACTERIAL EXTRACELLULAR VESICLES AS ANTIGEN DELIVERY-PLATFORMS FOR FISH
- 11.20 Marco Berrettini**, Renata Barić, Slavica Čolac, Matko Kolega, Danijel Mejdandžić, Marialetizia Fioravanti, Andrea Gustinelli, Luca Parma, Cinzia Viroli
MODELLING THE *Sparicotyle chrysophrii* OUTBREAKS IN GILTHEAD SEABREAM *Sparus aurata* MEDITERRANEAN AQUACULTURE
- 11:45 PLENARY 3**, PORTUGUESE MINISTER OF THE SEA AND POSTER AWARDS
- 12:50 LUNCH**
- 14.30 Rafaela A. Santos**, Nuno Mariz-Ponte, Nicole Martins, Russell Jerusik, Maria J. Saavedra, Aires Oliva-Teles, Helena Peres, António P. Carvalho, Conceição Santos, Cláudia R. Serra
QUORUM-QUENCHING *Bacillus* spp. PROTECT FISH FROM *Edwardsiella tarda* INFECTION AND MODULATE THE IMMUNE SYSTEM OF GILTHEAD SEABREAM *Sparus aurata*
- 14.50 Bruno Reis**, A. Gonçalves, P. Santos, M. Sardinha, L.E.C. Conceição, R. Serradeiro, J. Pérez-Sánchez, J. Calduch-Giner, U. Schmid-Staiger, K. Frick, J. Dias, B. Costas
LOCAL AND SYSTEMIC IMMUNE RESPONSE OF GILTHEAD SEABREAM *Sparus aurata* JUVENILES FED MICROALGAE-DERIVED B-GLUCANS
- 15.10 Isabel Cabas**, Pablo Castejón, Victoria Gómez, Elena Chaves Pozo, Isabel Cerezo-Ortega, Miguel Ángel Moriñigo, Eduardo Martínez Manzanares, Alfonsa García-Ayala, Jorge Galindo-Villegas
VACCINATION OF GILTHEAD SEABREAM *Sparus aurata* AFTER ESTROGENIC ORAL MODULATION ALTERS THE GUT ENDOBIOME AND IMMUNE STATUS VIA GPER1
- 15.30 Felix Acosta**, Belinda Vega, Daniel Montero, Luis Monzón-Atienza, José Ramos-Vivas, Jorge Galindo-Villegas
PHYLOGENETIC RECONSTRUCTION AND HISTOPATHOLOGICAL CHARACTERIZATION OF VIRULENT *Nocardia brasiliensis* EXPERIMENTALLY INFECTED IN MEAGRE *Argyrosomus regius*
- 15.50 Uthpala Chandrarathna**, Kjetil Korsnes, Hilde Sindre, Mette Sørensen, Ioannis N. Vatsos
SCREENING OF CAPTURED WILD ATLANTIC COD *Gadus morhua* L. FOR VHS VIRUS AND EVALUATE THE RISK OF TRANSMITTING VHS VIRUS FROM ATLANTIC COD TO ATLANTIC SALMON *Salmo salar*
- 16.10 Robert Potts**, Ross Houston, Tim Bean
OSTREID HERPES VIRUS INFECTION IN PACIFIC OYSTER TISSUE EXPLANTS
- 16.30 Francisco Furtado**, Mette W. Breiland, David Strand, Lars-Flemming Pedersen, Carlo Lazado
PERACETIC ACID AS A TREATMENT FOR AMOEBIC GILL DISEASE: EFFICACY AND PHYSIOLOGICAL RESPONSES OF ATLANTIC SALMON
- 16.50 Diane White**
SUSTAINABLE WATER SOLUTIONS TO INCREASE YIELDS AND IMPROVE QUALITY

AQUACULTURE ENVIRONMENT INTERACTIONS

Thursday, October 7 09.00 - 17.30 Lisboa-Hotel

Chairs: Roberto Pastres, Trevor Telfor, Joao Gomes Ferreira, Sonia Ray-Planellas

- 09.00 Leire Arantzamendi**, Marga Andrés, Jane Maher, Oihane C. Basurko, Izaskun Zorita, M^a Jose Suárez, Ainhara Pocheville, Manuel González, Mikel Aguinaga, Lien Van der Schueren
EVALUATION OF MAIN DRIVERS FOR THE IMPLEMENTATION POTENTIAL OF BIOBASED AND BIODEGRADABLE ROPES IN MUSSEL AND SEAWEED AQUACULTURE SECTORS, TO BE MORE ECO-FRIENDLY AND CREATE CIRCULAR ECONOMY
- 09.20 Hallstein Baarset**, Christian Bruckner, Lars Svenningsson, Johan Johansen, Richard Newton, Wesley Malcorps, J.A. Vazquez, Ricardo I. Pérez-Martin, Carmen G. Sotelo, Martiña Ferreira, Leticia Regueiro, Roberto Pastres
TOWARDS A CIRCULAR AQUACULTURE: THE CONTRIBUTION OF H2020 GAIN PROJECT
- 09.40 Hallstein Baarset**, Christian Bruckner
FROM BLUE TO GREEN: TRANSFORMING FISH SLUDGE INTO A VALUABLE BIO-FERTILISER PRODUCT USING INNOVATIVE DRYING TECHNOLOGY
- 10.00 Luis Conceição**, Gabriella Pereira, Ana Margarida Fernandes, Jorge Dias, Christina Hoerterer, Jessica Petereit, Bela Buck, Giulia Micallef, Josep Calduch-Giner, Fernando Naya-Català, Maria Carla Piazzon, Ariadna Sitjà-Bobadilla, Jaume Pérez-Sánchez, Filippo Faccenda, Michele Povinelli, Richard Newton, Brett Glencross, Cornelia Kreiß, Benjamin Costas, Jorge Fernandes, Johan Johansen
ECO-EFFICIENT FEEDS FOR EUROPEAN AQUACULTURE
- 10.20 Alhambra M. Cubillo**, Suzanne B. Bricker, João G. Ferreira, Andre S. Lopes, Heather Moore, Matt Service
SHELLFISH REGULATORY ECOSYSTEM SERVICES – POTENTIAL FOR NUTRIENT CREDIT TRADING
- 10.40 Joao G. Ferreira**, Leonard Bernard-Jannin, Alhambra Cubillo, Joao Lencart e Silva, Heather Moore, Matthew Service, Joao Pedro Nunes
APPLICATION OF A HOLISTIC FRAMEWORK FOR ECOSYSTEM MODELLING – CATCHMENT TO COAST ANALYSIS OF DUNDRUM BAY, NORTHERN IRELAND
- 11.00 David Izquierdo-Gomez**, Tanja Segvic-Bubic, Igor Taljancic, Iva Žužul
DESCRIPTION OF THE FIRST ESCAPE EVENT OF GREATER AMBERJACK *Seriola dumerili* (RISSO, 1810) IN THE MEDITERRANEAN SEA BY MEANS OF GENETICS, GEOMETRIC MORPHOMETRICS AND SOCIAL MEDIA
- 11.20 Imke Edebohls**, Cornelia Martina Kreiss, Simone Bruening, Christian Bruckner, José Anton Vásquez, Hallstein Baarset, Giulia Micallef
VALORISATION OF EUROPEAN AQUACULTURE SIDE STREAMS AND BY-PRODUCTS – A COST-BENEFIT ANALYSIS
- 11:45 PLENARY 3**, PORTUGUESE MINISTER OF THE SEA AND POSTER AWARDS
- 12:50 LUNCH**
- 14.30 Thomas Lecocq**, Lola Toomey, Pascal Fontaine
UNLOCKING THE WILD POTENTIAL: INTEGRATION OF GEOGRAPHIC DIFFERENTIATION IN DOMESTICATION PROCESSES TO FACILITATE FISH AQUACULTURE DIVERSIFICATION
- 14.50 Arianna Martini**, Domitilla Pulcini, Fabrizio Capoccioni, Marco Martinoli, Luca Buttazzoni, Giacomo Pirlo
ENVIRONMENTAL PERFORMANCE OF ITALIAN MUSSEL FARMING – LIFE CYCLE ASSESSMENT (LCA) AND BIOGENIC CARBON COMPUTATION FOR THREE CASE STUDIES

THURSDAY

- 15.10 Antonio Moreda-Piñeiro**, Begoña Espiña, Juan José López-Mayán, Ivone Pinheiro, Laura Rodríguez-Lorenzo, Monica Quarato, María del Carmen Barciela-Alonso, Elena Peña-Vázquez, María Vázquez, Santiago Cabaleiro, Natalia Mallo, Julie Maguire, Mick Mackey, Pilar Bermejo-Barrera
BIOACCUMULATION OF TITANIUM DIOXIDE AND SILVER NANOPARTICLES IN CULTURED MUSSELS AND TURBOT
- 15.30 Amoussou Nellya Lydie Yabo**, Thomas Lecocq, Alain Pasquet, Marielle Thomas
DEVELOPMENT OF AN *IN SILICO* METHOD TO DESIGN NEW SPECIES POLYCULTURE IN AQUACULTURE
- 15.50 Paola Parretti**, João Monteiro, Francesca Gizzi, Roi Martinez-Escauriaza, Sahar Chebaane, Natacha Nogueira, João Canning-Clode
FINDING DOURADA: ASSESSING *Sparus aurata* ESTABLISHMENT FOLLOWING AQUACULTURE ESCAPES
- 16.10 Åsa Strand**, Lovisa Bengtsson, Dallas L. Flickinger, Adam D. Hughes, Janaina M. Kimpara, Goncalo Marinho, Patricia Moraes-Valenti, Mayara F. Palma, Isabel Sousa Pinto, Johan Strandberg, Wagner C. Valenti, Erik Lindblom
A FRAMEWORK FOR SUSTAINABILITY ANALYSIS OF LOW TROPHIC SPECIES AQUACULTURE ACROSS THE ATLANTIC
- 16.30 Juan Manuel Valero Rodríguez**, Pablo Sanchez-Jerez, Kilian Toledo-Guedes
MARINE FINFISH AQUACULTURE, ANTIBIOTICS AND ESCAPED FISH: THE ELEPHANT IN THE ROOM
- 16.50 Aurélie Wilfart**, Florence Garcia-Launay, Frederic Terrier, Espoir Soudé, Pierre Aguirre, Sandrine Skiba-Cassy
ECO-FORMULATION OF FISH FEEDS: A PROMISING EFFICIENT SOLUTION TO LIMIT AQUACULTURE IMPACTS ON THE ENVIRONMENT

IMTA / AQUAPONICS

Thursday, October 7 09.00 - 17.30 Mezzanine-Casino
Chairs: Maria Emília Cunha, Gercende Courtois de Viçose

- 09.00 Pauline O'Donohoe**, Brett Macey, Tomás Chalde, Luis Poersch, Adrian Macleod, Elisa Ravagnan
FIVE INTEGRATED MULTITROPHIC AQUACULTURE LABORATORIES, ONE GOAL – RESILIENT AQUACULTURE IN THE FACE OF EMERGING THREATS: ASTRAL PROJECT
- 09.20 Maria Emília Cunha**, Erik Malta, Blanca Partida, Maria del Mar Agraso, Laura Ribeiro
COMPARATIVE LIFE CYCLE ASSESSMENT OF SEMI-INTENSIVE AND EXTENSIVE POND IMTA AND SEMI-INTENSIVE CONVENTIONAL FISHPOND PRODUCTION
- 09.40 Celine Rebours**, Siv Anina Etter, Jan Sunde, Aleksander Handå, Kjell Inge Reitan
CONSTRAINTS AND OPPORTUNITIES OF SUSTAINABLE INTEGRATED MULTI-TROPHIC AQUACULTURE IN NORWAY: SALMONID SEA CAGE FARMING AS A DRIVING FORCE
- 10.00 Christophe Jaeger**, Vincent Gayet, Joël Aubin
ASSOCIATING SEA BREAM, OYSTER, CLAM AND SHRIMP IN AN EARTHEN POND LOOP: TOWARD AN ENVIRONMENTALLY FRIENDLY SYSTEM
- 10.20 Luis Poersch**, Mariana Holanda, Alessandro Cardoso, Gabriele Lara, Plinio Furtado, Gabriel Santana, Wilson Wasielesky
EFFECT OF TILAPIA *Oreochromis niloticus* ON SUSPENDED SOLIDS CONSUMPTION WHEN INTEGRATED WITH *Litopenaeus vannamei* IN BIOFLOC SYSTEM

- 10.40** **Paula Senff**, Océane Polowczyk, Jérémy Grosjean, Sylvain Milla, Christophe Robin, Pascal Fontaine
IMPROVING PRODUCTION OF EUROPEAN PIKEPERCH *Sander lucioperca* IN AQUAPONICS THROUGH PLANT BIOACTIVE MOLECULES
- 11.00** **Lorenzo Fruscella**, Benz Kotzen, Sarah Milliken
SOIL-BASED AQUAPONICS: THE EFFECTS OF SOIL ADDITION AS INVESTIGATED IN FOUR DIFFERENT TRIALS
- CANCELED** **11.20** **Hendrik Monsees**, Rebecca John, Gösta Baganz, Georg Staaks, Werner Kloas, Daniela Baganz
IMPROVED FERTILIZER MANAGEMENT FOR SMALL TO MEDIUM SIZED COMMERCIAL DECOUPLED AQUAPONIC SYSTEMS
- 11:45** **PLENARY 3**, PORTUGUESE MINISTER OF THE SEA AND POSTER AWARDS
- 12:50** **LUNCH**
- 14.30** **Baldassare Fronte**, Lorenzo Rossi, Carlo Bibbiani, Alberto Pardossi, Chiara Sangiacomo
COMMERCIAL FEED REPLACEMENT FOR A SUSTAINABLE AND SELF-SUFFICIENT INTEGRATED MARINE AQUAPONIC PRODUCTION
- CANCELED** **14.50** **Brett Macey**, Morgan Brand, Marissa Brink-Hull, Mark Cyrus, John Bolton
EFFLUENT-GROWN *ULVA* AS A FUNCTIONAL INGREDIENT FOR FARMED ABALONE: IMPACTS ON GROWTH, PHYSIOLOGY AND MICROBIOME
- 15.10** **Gercende Courtois de Viçose**, M. Magdy
INTEGRATION OF THE SEA CUCUMBER *Holothuria sanctori* TO ABALONE *Haliotis tuberculata coccinea* GROW-OUT PROCESSES
- 15.50** **Céline Rebours**, Jennifer Mildenerger, Janne K. Stangeland
ANTIOXIDATIVE ACTIVITIES, PHENOLIC COMPOUNDS AND MARINE FOOD ALLERGENS IN THE MACROALGAE *Saccharina latissima* PRODUCED IN INTEGRATED MULTI-TROPHIC AQUACULTURE SYSTEMS
- 16.10** **Erik Malta**, María M. Agraso Martínez, Martha B. Dunbar, M. Emilia Cunha, Bertrand Jacquemin, Jessica Ratcliff, Laura Ribeiro
A POLICY DEFINITION OF INTEGRATED MULTITROPHIC AQUACULTURE (IMTA) AS A MEANS TO STIMULATE ITS UPTAKE IN THE EUROPEAN ATLANTIC AREA
- 16.30** **Clifford Jones**, Ann Wu, Dirk Weich
DEVELOPING AN IMTA VALUE CHAIN: SEA-BASED FARMING OF MACROALGAE AND MUSSEL IN SALDANHA BAY, SOUTH AFRICA
- 16.50** **Frank Kane**, Panagiotis Vlacheas
IMPAQT – AN INTELLIGENT MANAGEMENT SYSTEM FOR INTEGRATED MULTI-TROPHIC AQUACULTURE

MICROBIOME

Thursday, October 7 09.00 - 17.30 Sidney-Hotel

Chairs: Samuel Martin, Peter Bossier

- 09.00 Iaria Bernardini**, Alice Manuzzi, Giulia Dalla Rovere, Morgan Smits, Jacopo Fabrello, Luciano Masiero, Cristina Breggion, Andrea Sambo, Camilla Bertolini, Roberto Pastres, Cinzia Bettiol, Elena Semenzin, Claudio Carrer, Maurizio Varagnolo, Marco Ruffino, Valerio Matozzo, Luca Bargelloni, Tomaso Patarnello, Massimo Milan
HOST-MICROBIOTA INTERACTION IN THE MANILA CLAM *Ruditapes philippinarum* FARMED IN DIFFERENT SITES OF THE VENICE LAGOON
- 09.20 Leire Arantzamendi**, Ane del Rio-Lavín, Sébastien Monchy, Camilla Campanati, Izaskun Zorita, Urtzi Izagirre, David C. Aldridge, Miguel Ángel Pardo
EFFECT OF MICROENCAPSULATED DIETS ON *Mytilus galloprovincialis* GUT MICROBIOTA
- 09.40 Marlene Lorgen-Ritchie**, Lynn Chalmers, Michael Clarkson, John Taylor, Herve Migaud, Samuel A.M. Martin
TEMPORAL CHANGES IN SKIN AND GILL MICROBIOMES ARE IMPACTED BY DEVIATIONS IN THE MICROBIAL COMMUNITY OF REARING WATER IN A RECIRCULATING AQUACULTURE SYSTEM
- 10.00 Wouter Mes**, Mike S.M. Jetten, Henk Siepel, Sebastian Lücker, Marnix Gorissen, Maartje A.H.J. van Kessel
GILL-ASSOCIATED NITROGEN CYCLE BACTERIA CONVERT AMMONIA TO NITROGEN GAS IN COMMON CARP *Cyprinus carpio* AND ZEBRAFISH *Danio rerio*
- 10.20 Eoin Costelloe**, Alex Douglas, Marlene Lorgan-Richie, Victoria Valdenegro, Ralph Bickerdike, Patricia Noguera, Elzbieta Król, Sam Martin
THE GILL MICROBIOTA COMPOSITION IN SEA FARMED ATLANTIC SALMON *Salmo salar*: LOCATION MATTERS
- 10.40 Anusha K.S. Dhanasiri**, Alexander Jaramillo-Torres, Abdelaziz A.A. Mohammed, Yanxian Li, Torunn Forberg, Åshild Krogdahl, Trond M. Kortner
EFFECTS OF SYNBIOIC DIETS ON RE-ESTABLISHMENT OF THE ATLANTIC SALMON GUT MICROBIOTA AFTER DYSBIOSIS TRIGGERED BY MEDICATED FEED
- 11.00 Jaelle C. Brealey**
MICROBIOME INCEPTION: AN INTESTINAL CESTODE CAUSES A HIERARCHICAL LANDSCAPE OF DISTINCT MICROBIAL COMMUNITIES NESTED WITHIN FARMED ATLANTIC SALMON *Salmo salar*
- 11.20 Carla Piazzon**, Fernando Naya-Català, Ariadna Sitjà-Bobadilla, Jaume Pérez-Sánchez
DIET AND HOST GENETIC BACKGROUND DRIVE DIFFERENCES IN THE TRANSCRIPTOMIC PROFILE OF INTESTINAL MICROBIOTA IN GILT HEAD SEA BREAM
- 11:45 PLENARY 3**, PORTUGUESE MINISTER OF THE SEA AND POSTER AWARDS
- 12:50 LUNCH**
- 14.30 Jacob A. Rasmussen**, Kasper R. Villumsen, Madeleine Ernst, Martin Hansen, Torunn Forberg, Shyam Gopalakrishnan, M. Thomas P. Gilbert, Anders M. Bojesen, Karsten Kristiansen, Morten T. Limborg
A MULTI OMIC APPROACH REVEALS ESSENTIAL HOST-MICROBIOTA INTERACTIONS IN THE INTESTINAL ENVIRONMENT OF RAINBOW TROUT *Oncorhynchus mykiss*
- 14.50 Ana Teresa Gonçalves**, Marco Simões, Ricardo Passos, Pedro Pires, Damiana Pires, Beatriz do Carmo, Teresa Baptista
EUROPEAN SEABASS *Dicentrarchus labrax* GUT MICROBIOTA MODULATION BY DIETS WITH *Gracilaria gracilis* BIOMASS INCLUSION

- 15.10 Cláudia R. Serra**, Laura Gasco, Francesco Gai, Aires Oliva-Teles, Paula Enes, Fábio Rangel, Fátima C. Pereira
MODULATION OF EUROPEAN SEA BASS *Dicentrarchus labrax* GUT MICROBIOTA BY DIETARY INSECT MEAL
- 15.30 Aprajita Singh**, Sajjad Karimi, Aleksandar Vidakovic, Markus Langeland, Johan Dicksved, Jorge Ferreira, Mohammad J. Taherzadeh, Anders Kiessling, Torbjörn Lundh
EFFECT OF FILAMENTOUS FUNGI *Neurospora intermedia* AND FEEDING PERIOD ON GUT MICROBIOTA OF RAINBOW TROUT *Oncorhynchus mykiss*
- 15.50 Morten Limborg**
APPLIED HOLOGENOMICS: LEVERAGING MICROBIOTA SERVICES THROUGH HOLO-OMIC ANALYSES IN FARMED FISH
- 16.10 Yanxian Li**, Karina Gajardo, Alexander Jaramillo-Torres, Ikram Belghit, Erik-Jan Lock, Trond Kortner, Åshild Krogdahl
REPRODUCIBLE CHANGES IN THE INTESTINAL MICROBIOTA OF ATLANTIC SALMON FED DIETS CONTAINING BLACK SOLDIER FLY LARVAE MEAL
- 16.30 Fernando Naya-Català**, Gabriella do Val Pereira, Maria Carla Piazzon, Ana Margarida Fernandes, Josep Alvar Calduch-Giner, Ariadna Sitja-Bobadilla, Luis E.C. Conceição, Jaume Pérez-Sánchez
UNRAVELLING THE IMPACT OF INTESTINAL MICROBIOTA ON HOST TRANSCRIPTOMICS IN GILTHEAD SEA BREAM JUVENILES FED NON-CONVENTIONAL FEED INGREDIENTS
- 16.50 Mariana Ferreira**, Yousri Abdelhafiz, Luisa M.P. Valente, Viswanath Kiron
SEAWEED *Gracilaria gracilis* AND MICROALGAE *Nannochloropsis oceanica* SINGLE OR IN COMBINATION MODULATE EUROPEAN SEABASS *Dicentrarchus labrax* INTESTINAL MICROBIOTA

RECIRCULATING AQUACULTURE SYSTEMS

Thursday, October 7 09.00 - 17.30 View Room-Casino

Chairs: Jelena Kolarevic, Christopher Naas

- 09.00 Karolína Ranglová**
LIVE AQUAFEED PRODUCTION IN A NOVEL, SHORT LIGHT-PATH, ANNULAR COLUMN PHOTOBIOREACTOR WITH INTERNAL LED ILLUMINATION
- 09.20 Christopher Naas**, Werner Kloas, Andreas Müller-Belecke
THE APPLICATION OF NaCl IN PIKE-PERCH AQUACULTURE TAKING INTO ACCOUNT ONTOGENY
- 09.40 Herve Migaud**, Michael Clarkson, Lynn Chalmers, Chessor Matthew, Pedro Munoz, Ahmed Ahmed, Simon Mackenzie, John Taylor
EFFECT OF FRESHWATER RAS ENVIRONMENT ON OSMOREGULATION, GROWTH PERFORMANCE AND ANTIVIRAL RESPONSE IN ATLANTIC SALMON *Salmo salar* POST-SMOLTS
- 10.00 Jamie Downes**, Fintan Egan, Tom McDermott, Suzanne Kelly, Frank Kane, Joanne Casserly, Jack D'Arcy, Aideen Kearney, Pauline O'Donohoe, Liz Ryder, Pat Hughes, Alan Drumm, Neil Ruane
A COMPARISON OF TWO STRAINS OF ATLANTIC SALMON REARED IN RAS AND FLOW THROUGH PRODUCTION SYSTEMS
- 10.20 Christopher Good**, Curtis Crouse, Travis May, John Davidson, Tom Ole Nilsen, Åsa Maria Espmark
INVESTIGATING THE IMPACT OF WATER TEMPERATURE ON SEXUAL MATURATION IN ATLANTIC SALMON POST-SMOLTS

- 10.40 Carlo Lazado**, Danilo Carletto, Kevin T. Stiller, Vasco Mota, João Osório, Gerhardus C. Verstege, Jelena Kolarevic, Lena Hovda Aas, Britt-Kristin M. Reiten, Roy-Inge Hansen, Chris Good, Lill-Heidi Johansen
DISINFECTION, BIOSECURITY AND FISH HEALTH IN ATLANTIC SALMON RAS
- 11.00 Kevin Stiller**, Stig Johansen, Michael Vadseth, Per Brunsvik
INDUSTRIAL TESTING OF A NEW NORWEGIAN OZONE REACTOR AND SKIMMER SYSTEM
- 11.20 Paulo Fernandes**, Sanni Aalto, Helga Åsnes, Paula Rojas-Tirado, Åse Åtland, Carlos Letelier-Gordo
SULFATE REMOVAL BY NANOMEMBRANE FILTRATION REDUCES THE RISK OF BIOFILTER RELATED HYDROGEN SULFIDE INCIDENTS IN RAS
- 11:45 PLENARY 3, PORTUGUESE MINISTER OF THE SEA AND POSTER AWARDS**
- 12:50 LUNCH**
- 14.30 Deni Ribicic**, Stine Wiborg Dahle, Kari Attramadal, Tobias Busche, Roman Netzer
HOW UNIQUE OR COMMON ARE MICROBIAL COMMUNITIES IN BIOFILTERS? A TALE OF STATE-OF-THE-ART LONG-TERM MONITORING OF INDUSTRIAL RECIRCULATING AQUACULTURE SYSTEMS
- 14.50 Diana Bastos Almeida**, Catarina Magalhães, Zélia Sousa, Maria Teresa Borges, Eliane Silva, Isidro Blanquet, Ana Paula Mucha
A STUDY OF THE DYNAMICS OF THE PROKARYOTIC COMMUNITY IN A RECIRCULATING AQUACULTURE SYSTEM (RAS) FROM A SOLE *Solea senegalensis* HATCHERY
- 15.10 Xiaoyu Huang**, Anne Johanne Dalsgaard, Sanni-Leea Aalto, Per Bovbjerg Pedersen
THE IMPACTS OF DIETARY PHOSPHORUS ON WATER QUALITY IN RECIRCULATING AQUACULTURE SYSTEMS
- 15.30 Silvio Cristiano**, Hallstein Baarset, Lars Svenningsson, Christian Bruckner, Roberto Pastres
NOVEL ENVIRONMENTAL EVALUATION OF CIRCULAR INNOVATIONS: EMERGY ASSESSMENT OF RAS BY-PRODUCT VALORISATION OPTIONS
- 15.50 Lukas Manomaitis**, Dominique Bureau, Neda Nemati, Sirri Kayhan
THE INTERNATIONAL AQUACULTURE FEED FORMULATION DATABASE (IAFFD): NUTRIENT FORMULATION TARGETS FOR DIFFERENT PRODUCTION SYSTEMS
- 16.10 Carlos Yanes-Roca**, Karolina Ranglova, Michal Bures, Tomas Policar, Jiri Masojidek
LIVE FEED ENRICHMENTS USING ALGAE TECHNOLOGY FOR PIKEPERCH *Sander lucioperca* LARVAL CULTURE

PLENARY 3, PORTUGUESE MINISTER OF THE SEA AND POSTER AWARDS

Thursday, October 7 11.45 - 12.50 Auditorium

Chairs: Maria Teresa Dinis, Sachi Kausik

- 11.45 Laurie Carol Hofmann**, Gesche Kause
CREATING NARRATIVES FOR SUSTAINABLE MARINE FOOD SYSTEMS - MATCHING OCEAN LITERACY, TRANSFORMATION NEEDS AND SOCIETAL PRIORITIES
- 12.20 Ricardo Santos**, Portuguese Minister of the Sea
- 12.30 POSTER AWARDS**
- 12.50 LUNCH**

APPLIED ASPECTS OF AQUACULTURE

Thursday, October 7 14.30 - 17.30 Caracas 4th Floor

Chair: João Rito

- 14.30** **João Rito**, Nuno Leite, Daniela Santos, Carlos Estevão Simonka, Sónia Cotrim Marques, Sérgio Miguel Leandro, John Griffith Jones
REACHING HIGH SUSTAINABILITY STANDARDS IN FISH AQUACULTURE
- 14.50** **Alberto Ribes-Navarro**, Juan C. Navarro, Francisco Hontoria, Naoki Kabeya, Inger B. Standal, Jan O. Evjemo, Óscar Monroig
INVESTIGATING THE BIOSYNTHESIS OF LONG-CHAIN POLYUNSATURATED FATTY ACIDS IN MARINE GAMMARIDS
- 15.10** **Antoni Ibarz**, Waldo Nuez, Ignasi Sanahuja, Laura Fernández-Alacid
WHY TO BET ON DIETARY LYSO-PHOSPHOLIPIDS: DEEP ANALYSIS OF WAYS-OF-ACTION IN SALMON VIA INTESTINE AND LIVER INTERACTOMES
- 15.30** **Camilla Campanati**, Leire Aranzamendi, Izaskun Zorita, David Willer, Jasmin Schubert, David Aldridge
SUSTAINABLE AQUACULTURE: FROM NUTRIENT RECYCLING TO IMPROVED HATCHERY DIETS TECHNOLOGY
- 15.50** **Marta Blanes-García**, Pablo García-Salinas, Marina Morini, Luz Pérez, Juan F. Asturiano, Víctor Gallego
USING OSMOTIC PUMPS TO INDUCE SEXUAL MATURATION IN MALES AND FEMALES OF EUROPEAN EEL *Anguilla anguilla*
- 16.10** **Susanne Schäfer**, Sonia K.M. Gueroun, Carlos Andrade, João Canning-Clode
ASSESSMENT OF OPTIMAL TEMPERATURE AND SALINITY CONDITIONS TO CULTURE *Aurelia solida*
- 16.30** **Priadi Setyawan**, Mark Camara, John Bastiaansen, Hans Komen
THE POTENTIAL FOR COMBINED PRODUCTION OF SALINITY TOLERANT TILAPIA AND SHRIMP IN BRACKISH WATER PONDS IN INDONESIA
- 16.50** **Paul-Daniel Sindilariu**, Jan Giebichenstein
CIRCULARITY AND WASTE VALORISATION FROM A (RAS) FISH FARMERS PERSPECTIVE
- 17.10** **Pablo García-Salinas**, Víctor Gallego, Juan F. Asturiano
CRYOPRESERVATION PROTOCOLS FOR ELASMOBRANCH SPERM CRYOBANKING: NEW TOOLS FOR SHARKS AND RAYS CONSERVATION

GENOMICS / POST-GENOMICS / EPIGENETICS

Thursday, October 7 14.30 - 17.30 Funchal-Hotel

Chairs: Ross Houston, Anna Wargelius

- 14.30** **Delphine Lallias**, Anne Aubert-Frambourg, Aurélie Chauhot-Talmon, Luc Jouneau, Laurent Labbé, Lionel Goardon, Marjorie Bideau, Jean-Michel Le Calvez, Edwige Quillet, Hélène Jammes, Hélène Kiefer, Mathilde Dupont-Nivet
IMPACT OF TEMPERATURE REGIME DURING EMBRYONIC DEVELOPMENT ON GENOMEWIDE PATTERNS OF DNA METHYLATION IN LIVER SAMPLES OF JUVENILE RAINBOW TROUT
- 14.50** **Kaja H. Skjærven**, Takaya Saito, Jorge M.O. Fernandes, Paul Whatmore, Pedro Araujo, Maren Mommens, Marit Espe
SEASONAL BROODSTOCK MANAGEMENT ALTERS THE EPIGENOME OF THE NEXT GENERATION OF ATLANTIC SALMON *Salmo salar*

- 15.10 John Buchanan**, Spencer Herbert, Takeshi Umazume, Xaveir Lauth
GENOME EDITING TO PRODUCE MONOSEX AND STERILE FISH FOR AQUACULTURE
- 15.30 María Saura**, Almudena Fernández, Jesús Fernández, Ramón Peiro-Pastor, Carolina Peñaloza, Luca Bargelloni, Costas S. Tsigenopoulos, Beatriz Villanueva
POPULATION STRUCTURE AND GENETIC VARIABILITY BASED ON GENOMIC INFORMATION IN GILTHEAD SEABREAM AND EUROPEAN SEABASS POPULATIONS
- CANCELED 15.50 Jennifer Nascimento-Schulze**, Tim P. Bean, Bonnie A. Fraser, Ross D. Houston, Josephine R. Paris, Carolina Penaloza, Matthew B. Sanders, James R. Whiting, Robert P. Ellis
DEVELOPMENT OF A MEDIUM DENSITY SNP-ARRAY FOR THE BLUE MUSSEL SPECIES-COMPLEX
- 16.10 Eiríkur Andri Thormar**, Louise von Gersdorff Jørgensen, Moonika Haahr Marana, Cecilie Grønlund Clausen, Jacob Agerbo Rasmussen, Miyako Kodama, Morten T. Limborg
ZEBRAFISH AND CRISPR/CAS: A MODEL TO ELUCIDATE GENETIC EFFECTS ON THE MICROBIOTA
- 16.30 Sara Faggion**, Maud Duranton, Pierre-Alexandre Gagnaire, Marc Vandeputte, François Allal
GENOMICALLY ASSISTED RECONSTRUCTION OF THE ANCESTRAL *Dicentrarchus labrax* L. MEDITERRANEAN LINEAGE
- 16.50 Md. Golam Rbbani**, Artem Nedoluzhko, Fedor Sharko, Ioannis Konstantinidis, Joost Andre M. Raeymaekers, Jorge Galindo-Villegas, Jorge Manuel de Oliveira Fernandes
DIFFERENCES IN THE CIRCULAR RNA TRANSCRIPTOME BETWEEN WILD AND CAPTIVE-BRED NILE TILAPIA

HISEA DATA SERVICES

BENEFIT OF HIGH-RESOLUTION WATER QUALITY DATA SERVICES

Thursday, October 7 14.30 - 17.30 Berlim-Hotel

Chair: Julie Maguire

Benefit of High-Resolution Water Quality Data Services

HiSea is developing innovative services for the aquaculture sector to provide **more reliable and accurate forecasts and alerts** of water quality and conditions. Co-designed with end-users, to answer the real needs of the **aquaculture sector**, the services offered by HiSea incorporates and processes data that are being obtained through the Copernicus marine services data, combined with local monitoring data, advanced modelling and satellite derived information. The HiSea platform enables users to improve operation, planning, and management of different marine activities by supplying the following services:



Wave and Wind Forecast Alerts:

Provide accurate, real-time and forecasted weather and storm events, including currents, waves and wind (historical and real time) and five days of forecast data.



Water Quality Forecast and Personalized Alerts:

Accurate, real-time and forecasted water quality information, including, oxygen levels, turbidity, microbiology, sea and air temperatures to enable farmers to implement effective and efficient aquaculture management.



Jellyfish Invasion Forecast:

Early warning of jellyfish invasions. Through forecasting their probable timing, magnitude and location and the simulation of alternative actions, these services will mitigate adverse effects on operations and environmental impacts.



Support for Optimizing Fish Cage Settlement:

Based on advanced data analytics and performance indicators, this will allow farmers and fish cage providers to evaluate the optimal location and improve the process of anchoring cages and their movability. This consulting service integrates both chemical and physical water parameters of historical data and forecast models.



Harmful Algal Bloom Forecast:

Early warning and anticipation of harmful events such as algal blooms.



Optimizing Pumping Energy

HiSea enables reducing pumping water energy costs with optimal combination and set parameters to guarantee the same water flow at a minimum cost. We provide better forecasts of the tide level and consequently decrease pumping time.

THURSDAY



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 82193

- 14.30 In Depth Look at the Benefits of High-Resolution, Earth-Observation Data Services for Aquaculture
- 14.45 Introduction of Use Cases
- 15.00 The HiSea platform: an Application for Aquaculture Operations
- 15.15 The HiSea platform, an Innovative Tools for Use in Specific Scenarios
Demonstration and Hands on session

NOTES

NOTES

NOTES