

aquaculture europe



TUESDAY, October 8

PLENARY 1 AND STUDENT SPOTLIGHT AWARD

Tuesday, October 8 09.00 - 10.00 Europe Hall

Chair: Stefan Meyer

09.00 Charles R. Tyler
THE ENVIRONMENT AND FISH HEALTH

Student Spotlight Award

10:00 BREAK

AQUAPONICS AND IMTA

Tuesday, October 8 10.30 - 12.50 Foyer 4

Chairs: Ben Kozen, Hendrik Monsees

10.30 Luca Grosso, Alessandra Fianchini, Stefano Cataudella, Michele Scardi, Arnold Rakaj
INTEGRATED MULTITROPHIC AQUACULTURE WITH THE SEA URCHIN *Paracentrotus lividus* AND THE SEA CUCUMBER *Holothuria tubulosa*: AN INNOVATIVE MODEL OF SUSTAINABLE AQUACULTURE

10.50 Filipe Soares, Ana Nobre, Tomé Silva, Rui Pereira, Helena Abreu, Luísa Valente, Luísa Conceição
NUTRIENT-BASED MODELS AS COMPLEMENTARY TOOLS TO ASSESS FINFISH AMMONIA EXCRETION AS THE PRIMARY NUTRIENT SOURCE IN A SEAWEED COMMERCIAL IMTA FARM

11.10 Frank Kane, Joanne Casserly
IMTA AND SMARTER MONITORING FOR GREENER AQUACULTURE

- 11.30 M.A. Lorenzo**, M.A. Poli, E.C. Legarda, I. Pinheiro, M.A. Martins, W.Q. Seiffert, F.N. Vieira
INTEGRATED MULTITROPHIC AQUACULTURE APPLIED TO SHRIMP REARING IN A BIOFLOC SYSTEM WITH TILAPIA AND SARCOCORNIA
- 11.50 Philipp Sandmann**, Adrian A. Bischoff
UTILIZATION OF AFRICAN CATFISH *Clarias gariepinus* SEDIMENTS FOR CULTIVATING THE POLYCHAETE *Hediste diversicolor* (O.F. MÜLLER, 1776) UNDER DIFFERENT TEMPERATURE REGIMES
- 12.10 Gösta Baganz**, Daniela Baganz, Georg Staaks, Hendrik Monsees, Werner Kloas
COMMERCIAL AQUAPONICS: TWO ECONOMIC SCENARIOS FOR A DOUBLE CIRCUIT SYSTEM
- 12.30 Vincent Gennotte**, A.A. Forchino, S.M. Takedo Tchuindjo, J. Leroy, P. Maesen, C. Mélard, C. Rougeot, R. Pastres, D. Brigolin
ENVIRONMENTAL AND ECONOMIC ASSESSMENT OF A PILOT AQUAPONIC PRODUCTION: A LIFE CYCLE APPROACH

EPIGENETICS

Tuesday, October 8 10.30 - 12.50 Exhibition 2

Chair: Elena Sarrapoulou

- 10.30 Erick Perera**, Serhat Turkmen, Paula Simó-Mirabet, Maria J. Zamorano, Hanlin Xu, Marisol Izquierdo, Jaime Pérez-Sánchez
STEAROYL-COA DESATURASE-1 IS EPIGENETICALLY REGULATED BY BROODSTOCK NUTRITION IN GILTHEAD SEA BREAM *Sparus aurata*
- 10.50 Anne-Catrin Adam**, Marit Espe, Takaya Saito, Paul Whatmore, Jorge M.O. Fernandes, Kaja H. Skjaerven
EPIGENETIC EFFECTS OF DIETARY MICRONUTRIENTS IN ATLANTIC SALMON *Salmo salar* MUSCLE
- 11.10 Hanlin Xu**, Shajahan Ferosekhan, Serhat Turkmen, Juan Manuel Afonso, Daniel Montero, Marisol Izquierdo
IMPROVED USE OF LOW FM AND LOW FO DIETS IN GILTHEAD SEABREAM *Sparus aurata* JUVENILES OBTAINED BY COMBINED BROODSTOCK SELECTION AND NUTRITIONAL PROGRAMING
- 11.30 Suvra Roy**, Parisa Norouzitallab, Peter Bossier, Daisy Vanrompay
EPIGENETIC INHERITANCE AND LONG-LASTING PROTECTION AGAINST VIBRIOS INDUCED BY A PLANT-DERIVED COMPOUND IN BRINE SHRIMP MODEL
- 11.50 Delphine Lallias**, E. Quillet, M. Bernard, C. Ciobotaru, N. Dechamp, J.-M. Le Calvez, M. Bideau, L. Goardon, L. Labbé, M. Dupont-Nivet
ANALYSIS OF GENOMEWIDE PATTERNS OF DNA METHYLATION IN RESPONSE TO AN EARLY TEMPERATURE STRESS IN RAINBOW TROUT
- 12.10 Serhat Turkmen**, Hanlin Xu, Marisol Izquierdo
NUTRITIONAL PROGRAMMING OF LIPID-METABOLISM IN GILTHEAD SEA BREAM: TRANSGENERATIONAL EFFECTS OF BROODSTOCK SELECTION AND FEEDING

MACROALGAE

Tuesday, October 8 10.30 - 12.50 Festival

Chair: Jorunn Skjermo

TUESDAY

- 10.30 Diogo Raposo**, Frank Neumann, Jon Funderud
BROWN SEAWEEDS – A STATUS REPORT OF OFFSHORE CULTIVATION AND EXPECTED MARKET DEVELOPMENTS IN EUROPE
- 10.50 Silvia Blanco González**, Fiona Wanjiku Moejes, Julie Maguire
LARGE-SCALE CULTIVATION OF SEAWEED IN WEST CORK: AN IRISH SUCCESS STORY
- 11.10 Erik Malta**, Leen Bastiaens, Kathy Elst, Maria del Mar Agraso Martinez
PERSPECTIVES FOR INDOOR SEAWEED *Ulva ohnoi* CULTIVATION IN PHOTOBIOREACTORS
- 11.30 Siv A. Etter**, S. Forbord, V.R. Dahlen, A. Handa, Y. Olsen, K.I. Reitan
INITIAL UPTAKE CAPACITY OF AMMONIUM IN *Saccharina latissima* IN AN IMTA CONTEXT
- 11.50 Sofiiia Tretiak**, Jakob Schwoerbel, Ramona Bosse, Frederike Reimold, Ina Enders, Dietmar Hoffmann, Joachim Henjes, Bela Buck, Laurie Hofmann
OPTIMIZATION OF ANTIOXIDANT ACTIVITY IN SEA VEGETABLES GROWN IN RECIRCULATING AQUACULTURE SYSTEMS (RAS)
- 12.10 Sander van den Burg**, Maggie Skirtun, Mirjam Bernard
EUROPEAN SEAWEED VALUE CHAINS IN AN INTERNATIONAL PERSPECTIVE

NORDIC RAS

(SEPARATE REGISTRATION REQUIRED)

Tuesday, October 8 10.30 - 12.50 Room 1

GENERAL CONTRIBUTED ENVIRONMENTAL

Tuesday, October 8 10.30 - 12.50 Lounge 1-3

Chair: Daniel Taylor

- 10.30 Festus I. Adeosun**
THE FISHES OF AKOMOJE RESERVOIR DRAINAGE BASIN IN LOWER RIVER OGUN, NIGERIA: DIVERSITY AND ABUNDANCE
- 10.50 Ingrid Askeland Johnsen**, Alison Harvey, Anne D. Sandvik, Ola Ugedal, Bjørn Ådlandsvik, Vidar Wennevik, Kevin A. Glover, Ørjan Karlsen
SALMON LICE *Lepeophtheirus salmonis* INDUCED MORTALITY OF ATLANTIC SALMON *Salmo salar* DURING POST-SMOLT MIGRATION IN NORWAY
- 11.10 Maggie Skirtun**, Sander van den Burg, Trond Selnes
MARINE RESOURCES IN CIRCULAR CLIMATE SMART FOOD SYSTEMS: A CASE STUDY OF SEAWEED CULTIVATION IN THE NORTH SEA
- 11.30 Alda Miftari**
ECONOMIC ISSUE AND GOOD ATTRIBUTES OF SUSTAINABLE AGRICULTURE SYSTEM WITH A FOCUS ON CAP REFORM AND WATER FRAMEWORK DIRECTIVE
- 11.50 Lindsay Brager**, Peter Cranford, David Wong, Brent Law
~~CANCELLED~~ ALTERNATIVE METHODS FOR MONITORING BENTHIC ORGANIC ENRICHMENT EFFECTS AND APPLICABILITY ACROSS A RANGE OF ENVIRONMENTAL AND AQUACULTURE CONDITIONS
- 12.10 Henry Peterson**
WASHINGTON STATE'S POLLUTION IDENTIFICATION AND CORRECTION PROGRAM'S WORK TO PROTECT AND RESTORE SHELLFISH BEDS AND PUBLIC HEALTH
- 12.30 Rodrigo Roubach**, F.C.M. Godoi, F.S. David, N.S. Fialho, M.R. Brande, G.W. Bueno
ENVIRONMENTAL SUSTAINABILITY INDICATORS APPLIED IN SMALL SCALE FAMILY FISH FARM AT THE ATLANTIC FOREST IN SOUTH AMERICA

CLIMATE CHANGE

Tuesday, October 8 10.30 - 17.30 Room 5

Chairs: Myron Peck, Orestis Stavrakidis

- 10.30 Michelle Barbosa**, Caroline Schwaner, Emmanuelle Pales Espinosa, Bassem Allam
OCEAN ACIDIFICATION AND MULTIPLE STRESSORS AFFECT LARVAL BUT NOT JUVENILE STAGES OF THE EASTERN OYSTER *Crassostrea virginica*
- 10.50 Patrícia Anacleto**, Mariana Carmona, Ana Luísa Maulvault, Vera Barbosa, Marta Santos, Pedro Pousão-Ferreira, Luísa M.P. Valente, António Marques, Rui Rosa
FISH ENERGY BUDGET OF THE ZEBRA SEABREAM *Diplodus cervinus* UNDER OCEAN WARMING AND ACIDIFICATION
- 11.10 I. Martins**, A. Azevedo, R. Ramos, M.H. Abreu, R. Pereira, L.M.P. Valente
HOW WILL THE PRODUCTION OF AN ECONOMICALLY RELEVANT ALGA *Gracilaria* sp. VARY WITH TEMPERATURE RISE?

- 11.30 António Marques**, A. L. Maulvault, Rui Rosa, Mário S. Diniz
CLIMATE CHANGE AND EMERGING CHEMICAL CONTAMINANTS IN MARINE ORGANISMS: BIOACCUMULATION, ECOTOXICOLOGY AND PUBLIC HEALTH IMPACTS
- 11.50 Remigiusz Panicz**, Beata Calka, André Sobral Lopes, João Lencart e Silva, João Gomes Ferreira, Jacek Sadowski, Paulina Hofsoe-Oppermann, Slawomir Keszka, Nick Taylor, Adam Kennerley, James Guilder, Susan Kay
PATHOGEN AND BIOMASS GROWTH RISK ASSESSMENT MODEL FOR INLAND AQUACULTURE IN EASTERN EUROPE UNDER CLIMATE CHANGE
- 12.10 Myron Peck**, Pauline Kamermans, Tom Doyle, Nick Taylor, Joao Ferreira
RISKS AND OPPORTUNITIES OF CLIMATE CHANGE TO EUROPEAN AQUACULTURE: ADVANCES MADE IN THE EU CERES PROJECT
- 12.30 Lena Schenke**, Tamás Bardócz, Kyra Hoevenaars
CLIMATE CHANGE IMPACTS ON THE EUROPEAN ISLANDS' AQUACULTURE SECTOR
- 12:50 LUNCH**
- 14.30 Isabel Fuentes-Santos**, Xosé Antón Álvarez-Salgado, Uxío Labarta, M^a José Fernández-Reiriz, Susan Kay, Solfrid Saetre Hjøllø
FORECASTING THE IMPACT OF FUTURE CLIMATE SCENARIOS ON CULTURED MUSSELS GROWTH IN THE GALICIAN RÍAS (NW SPAIN)
- 14.50 Alhambra Gadea Martínez Cubillo**, J.G. Ferreira, J. Lencart e Silva, C.M. Kreiss, P. Kamermans, C. Saurel, J. Icely, B. Fragoso
MODELLING THE IMPACTS OF CLIMATE CHANGE ON SHELLFISH AQUACULTURE
- 15.10 Stephanie Palmer**, Laurent Barillé, Pierre Gernez, Susan Kay, Stefano Ciavatta, Yoann Thomas, Philippe Glize
PAN-EUROPEAN MODELLING OF PACIFIC OYSTER *Crassostrea gigas* GROWTH IN THE OFFSHORE ENVIRONMENT: INDICATORS, REGIONAL COMPARISON AND CLIMATE CHANGE
- 15.30 Sally McGee**
THE SHELLFISH GROWERS CLIMATE COALITION: A BUSINESS PARTNERSHIP OF 100+ COMPANIES TAKING ACTION TO SECURE A LOW CARBON FUTURE FOR THE BENEFIT OF SHELLFISH AND THE ENVIRONMENTS THEY DEPEND ON
- 15.50 Gergo Gyalog**, Béla Csukás, László Berzi-Nagy, Mónika Varga
IMPACT OF CLIMATE CHANGE ON CARP YIELDS IN HUNGARIAN POND AQUACULTURE
- 16.10 Orestis Stavrakidis-Zachou**, Konstadia Lika, Nikos Papandroulakis
FORECASTING CLIMATE CHANGE IMPACTS ON GREEK AQUACULTURE PRODUCTION: A CLIMEFISH CASE STUDY
- 16.30 Øivind Bergh**, Ingrid Johnsen, Lars Asplin, Nina Sandlund, Anne D. Sandvik, Joao G. Ferreira, Nick Taylor
CLIMATE CHANGE AND MITIGATION OF ITS IMPACTS OF NORTH EUROPEAN AQUACULTURE

- 16.50 Cornelia Martina Kreiss**, Giulia Micallef, Tom Doyle, Ferit Rad, Virginia Martín, Joao Gomes Ferreira, Alhambra Cubillo, Joao Lencart e Silva, Eleni Papatathanasopoulou
FUTURE PROFITABILITY OF TYPICAL FINFISH FARMS IN EUROPE
- 17.10 John Icely**, A. Cubillo, M. Elliot, J. Ferreira, B. Fragoso, P. Kamermans, S. Kay, A. Kennerley, C. Kreis, A. Marques, D. Matias, M. Peck, J. Pinnegar, J. Pinnegar, H. Rambo, K. Smyth, V. Stetzenmuller, N. Taylor
POTENTIAL EFFECTS OF CLIMATE CHANGE ON OFFSHORE AQUACULTURE OF MEDITERRANEAN MUSSEL *Mytilus galloprovincialis* ON THE SW COAST OF PORTUGAL

NUTRITION: PHYSIOLOGY AND REQUIREMENTS

Tuesday, October 8 10.30 - 17.30 Europe Hall

Chair: Alessio Bonaldo, Antony Philip, Anne-Catrin Adam

- 10.30 Sofia Morais**, S. Puchol, J.M. Cerdá-Reverter, A.R. Angotzi
TASTE SENSING AND GUT FEELING: POSSIBLE INVOLVEMENT OF TASTE RECEPTOR TYPE 1 FAMILY IN SEABREAM *Sparus aurata*
- 10.50 David Domínguez**, Mohamed Cherkes, Ramon Fontanillas, Maria Jesus Zamorano, Marisol Izquierdo
EFFECTS OF DIFFERENT LEVELS OF VITAMINS B1, B9 AND B12 IN DIETS LOW IN FISHMEAL ON GILTHEAD SEA BREAM *Sparus aurata* FINGERLINGS
- 11.10 Rui Magalhães**, F. Coutinho, I. Guerreiro, A. Couto, C. Serra, H. Peres, A. Oliva-Teles
OXIDATIVE STRESS STATUS AND MICROBIOTA OF GILTHEAD SEA BREAM *Sparus aurata* FED DIFFERENT DIETARY ARA/EPA/DHA RATIOS
- 11.30 N. Gilannejad**, F.J. Moyano, G. Martínez-Rodríguez, M. Yúfera
REGULATION OF THE RHYTHMICITY OF PROTEOLYTIC DIGESTIVE FUNCTION IN GILTHEAD SEABREAM UNDER DIFFERENT DAILY FEEDING PROTOCOLS
- 11.50 Serena Busti**, Luca Parma, Nicole Francesca Pelusio, Lorenzo Morsiani, Lorenzo Mariani, Marina Silvi, Maurizio Mazzoni, Francesco Dondi, Manuel Yúfera, Neda Gilannejad, Francisco Javier Moyano, Pier Paolo Gatta, Alessio Bonaldo
EFFECTS OF DIFFERENT FEEDING FREQUENCIES ON GROWTH, FEED UTILIZATION, PLASMA BIOCHEMISTRY AND DIGESTIVE CONDITIONS OF GILTHEAD SEA BREAM *Sparus aurata* FED WITH DIFFERENT FISH MEAL AND FISH OIL DIETARY LEVELS
- 12.10 Sofia Engrola**, Raquel Carrilho, Rita Colen, Rita Teodósio, Jorge Dias, Cláudia Aragão
IMPROVING GILTHEAD SEABREAM *Sparus aurata* JUVENILES ADAPTABILITY TO ADVERSE CONDITIONS VIA NUTRITION
- 12.30 P. Wischhusen**, M. Briens, P.A. Geraert, P. Antony Jesu Prabhu, L. Larroquet, V. Véron, S.J. Kaushik, B. Fauconneau, S. Fontagné-Dicharry
PARENTAL AND DIRECT FEEDING EFFECTS OF DIETARY SELENIUM IN RAINBOW TROUT *Oncorhynchus mykiss* FRY

12:50 LUNCH

- 14.30 David Huyben**, Teresa Grobler, Douglas Tocher, Bente Ruyter, Brett Glencross
OPTIMISING LEVELS OF DIETARY FATTY ACIDS AND LIPIDS OF ATLANTIC SALMON UNDER NORMOXIC AND HYPOXIC CONDITIONS
- 14.50 Marit A.J. Nederlof**, Ep H. Eding, Anne-Jo van Riel, Isabelle Leguen, Stephane Panserat, Patrick Prunet, Johan W. Schrama
EFFECT OF EARLY LIFE HYPOXIA AND DIET COMPOSITION ON GROWTH FEED INTAKE AND OXYGEN CONSUMPTION OF RAINBOW TROUT *Oncorhynchus mykiss* IN LATER LIFE
- 15.10 Antony Jesu Prabhu Philip**, Marta Silva, May-Helen Holme, Thea Morken, Sofie Remø, Robin Ørnstrud, Pedro Araujo, Erik-Jan Lock, Rune Waagbø
IMPACT OF DIETARY ZINC LEVEL ON THE ZINC STATUS OF ATLANTIC SALMON PARR, SMOLT AND POST-SMOLT FED LOW FISH MEAL DIETS
- 15.30 Claudia Figueiredo-Silva**, C. Boggino, M. Sun, Maria Mastoraki, I. Papadakis, A. Theodoridou, M. Pavlidis, S. Chatzifotis
EFFECTS OF COMPLEXED TRACE MINERALS AT DIFFERENT INCLUSION RATES IN COMMERCIAL SEA BASS *Dicentrarchus labrax* DIETS
- 15.50 Nicole Francesca Pelusio**, Luca Parma, Serena Busti, Stefano Porcelli, Lorenzo Mariani, Lorenzo Morsiani, Francesco Dondi, Enric Gisbert, Maria Angeles Esteban, Federica D'Amico, Matteo Soverini, Marco Candela, Pier Paolo Gatta, Alessio Bonaldo
EFFECTS OF REARING DENSITY ON GROWTH, WELFARE INDICATORS AND DIGESTIVE CONDITIONS OF GILTHEAD SEA BREAM *Sparus aurata* FED DIFFERENT FISH MEAL AND FISH OIL DIETARY LEVELS
- 16.10 Thomas Staessen**, M.C.J. Verdegem, E.H. Eding, M.A.J. Nederlof, J.W. Schrama
EFFECT OF DIETARY NON-PROTEIN ENERGY SOURCE (STARCH VS. FAT) ON TOTAL BILE ACID POOL SIZE AND COMPOSITION OF RAINBOW TROUT *Oncorhynchus mykiss*
- 16.30 Karthik Masagounder**, Paulo Rema, Jorge Dias
EFFECTS OF INGREDIENT INCLUSION LEVEL AND FECES COLLECTION METHOD ON THE APPARENT NUTRIENT AND ENERGY DIGESTIBILITY OF INGREDIENTS IN NILE TILAPIA
- 16.50 Caroline Candebat**, Mark Booth, Igor Pirozzi, M. Basseer Codabaccus
SULFUR AMINO ACID REQUIREMENTS AND INTERACTIONS IN JUVENILE YELLOWTAIL KINGFISH *Seriola lalandi*
- 17.10 Monica B. Betancor**, Aurelio Ortega, Fernando de la Gándara, Matthew Sprague, Douglas R. Tocher, Gabriel Mourente
DEVELOPMENT OF FEEDS FOR JUVENILE ATLANTIC BLUEFIN TUNA *Thunnus thynnus* L: EFFECT OF LIPID LEVEL AND SOURCE

REPRODUCTION AND BROODSTOCK MANAGEMENT

Tuesday, October 8 10.30 - 17.30 Room 3

Chair: Constantinos Mylonas

TUESDAY

10:30 Yonathan Zohar

FROM FERTILITY TO STERILITY OF FARMED FISH – HORMONES AND GENES

10.50 Jurgen Adriaen, Moved to 14.50

11.10 Andrea Miccoli, Ioannis Fakriadis, Irini Sigelaki, Anastasios Raftopoulos, Constantinos C. Mylonas

SPAWNING KINETICS OF GREATER AMBERJACK *Seriola dumerili* IN RESPONSE TO DIFFERENT DOSES OF GnRH α IMPLANTS

11.30 Carlos Marrero Alemán, Wendy González López, Sandra Ramos Júdez, Isabel Navarro, N. Duncan

ARTIFICIAL FERTILISATION IN SENEGALESE SOLE *Solea senegalensis*: INDUCTION WITH GNRH α AND DETERMINATION OF EGG QUALITY

11.50 Michelle Grace Pinto Jørgensen, Einar Eg Nielsen, Elin Kjørsvik, Jonna Tomkiewicz
DOSE DEPENDENT EFFECTS OF CARP PITUITARY EXTRACT ON INDUCTION OF OVARIAN DEVELOPMENT IN EUROPEAN EEL *Anguilla anguilla*

12.10 Johanna Kottmann, Ian A.E. Butts, Michelle G.P. Jørgensen, Peter Ravn, Jonna Tomkiewicz

EFFECTS OF EXOGENOUS GONADOTROPIN TYPE (CARP VS. SALMON PITUITARY EXTRACT) ON OFFSPRING QUALITY IN EUROPEAN EEL

12.30 Arjan P. Palstra, Ignacio Giménez Nebot, Pauline Jéhannet, P. Mark Lokman, William Swinkels, Leon T.N. Heinsbroek

TESTING RECOMBINANT GONADOTROPINS FOR THE PROPAGATION OF EUROPEAN EEL *Anguilla anguilla*, PRETREATED BY FEMINIZATION, SIMULATED MIGRATION AND STEROID IMPLANTS

12:50 LUNCH

14.30 Javed Khan, Alvin Setiawan, M.J. Wylie, Steve Pether, J.E. Symonds

PROGRESS IN HAPUKU *Polyprion oxygeneios* PRODUCTION FROM F1 BROODSTOCK

14.50 Jurgen Adriaen, Joachim Claeys, Thomas Abeel, Wouter Meeus, Heidi Arnouts
EFFECT OF TEMPERATURE AND DIFFERENT SPAWNING AGENTS ON REPRODUCTION SUCCESS OF BURBOT IN CAPTIVITY

15.10 Rap Engler, A DIETARY SUPPLEMENTATION OF RAINBOW TROUT *Oncorhynchus*

mykiss BROODSTOCK WITH A LOW DOSE OF DRY GRAPE EXTRACT ON THE METABOLOMIC PROFILE OF THEIR EGGS AND THE GROWTH PERFORMANCES OF THEIR OFFSPRING

15.30 Adrien Marc, Jarrod Guppy, Dean Jerry, Peter Mulvey, Paige Bauer, Damien Paris
EVALUATING BARRAMUNDI *Lates calcarifer* SPERM QUALITY USING HIGH THROUGHPUT ADVANCED REPRODUCTIVE TOOLS

- 15.50 Francesca Bertolini**, Michelle Grace Pinto Jørgensen, Christiaan Henkel, Jonna Tomkiewicz
UNRAVELLING THE CHANGES DURING INDUCED SEXUAL MATURATION OF FEMALE EUROPEAN EEL *Anguilla anguilla* THROUGH RNA-SEQ: WHAT HAPPENS TO THE LIVER?
- 16.10 Ferosekhan Shajahan**, Cathaysa Pérez-García, Serhat Turkmen, Hanlin Xu, Juan Manuel Afonso, Ramon Fontanillas, Sadasivam Kaushik, Marisol Izquierdo
INFLUENCE OF GENETIC SELECTION FOR GROWTH AND DIETARY n-3 LC-PUFA LEVELS ON REPRODUCTIVE PERFORMANCE IN GILTHEAD SEA BREAM *Sparus aurata*
- 16.30 Ingun Næve**, Maren Mommens, Augustine Arukwe, Jonni J. Virtanen, Md. Enamul Hoque, Elin Kjørsvik
ESTABLISHING A NON-INVASIVE METHOD FOR SEXUAL MATURATION MONITORING IN ATLANTIC SALMON *Salmo salar* MALES AND FEMALES USING ULTRASOUND TECHNOLOGY
- 16.50 Ana Pombo**, Eliana Venâncio, Pedro M. Félix, Ana C. Brito, João Sousa, Francisco Azevedo e Silva, Tomás Simões
DOES THE DIET OF A *Holothuria tubulosa* BROODSTOCK INFLUENCE VIABILITY AND LARVAL DEVELOPMENT?
- 17.10 Leila Basti**, Jyoji Go, Kiyohito Nagai
EFFECTS OF MONO AND MIXED BLOOMS OF CHARMFUL ALGAE *Alexandrium*, *Karenia* AND *Chattonella* ON THE REPRODUCTION OF JAPANESE PEARL OYSTER *Pinctada fucata martensii*

FISH WELFARE

Tuesday, October 8 10.30 - 17.30 Room 2

Chair: Michalis Pavlides

- 10.30 Albin Gräns**, Jennifer Bowman, Per Hjelmstedt, Nicole van Nuland
CARBON DIOXIDE STUNNING OF RAINBOW TROUT *Oncorhynchus mykiss*: THE EFFECTS OF DIFFERENT SEASONAL TEMPERATURES AND THE RELIABILITY OF VISUAL INDICATORS OF CONSCIOUSNESS
- 10.50 Jaume Pérez-Sánchez**, Juan Antonio Martos-Sitcha, Javier Sosa, Dailos Ramos-Valido, Francisco Javier Bravo, Cristina Carmona-Duarte, Henrique Leonel Gomes, Josep Àlvar Caldach-Giner, Enric Cabruja, Aurelio Vega, Miguel Ángel Ferrer, Manuel Lozano, Juan Antonio Montiel-Nelson, Juan Manuel Afonso
AEFishBIT: SMART DEVICE FOR TRACKING FISH BEHAVIOUR AND ACTIVITY
- 11.10 Carolina Gutierrez Rabadan**, Charlotte Spreadbury, Sonia Consuegra del Olmo, Carlos Garcia de Leaniz
DEVELOPMENT AND VALIDATION OF OPERATIONAL WELFARE INDICATORS (OWI) FOR FARMED LUMPFISH *Cyclopterus lumpus* L.
- 11.30 Xavier Gutierrez**, Felipe A. Briceno, Rafael Leon, Patricio Feest, Rafael Leon, Patricio Feest
LINKING FRESH WATER QUALITY AND FISH WELFARE WITH SEA WATER FEEDING PERFORMANCE IN CHILEAN SALMON FARMING: A MODELLING TOOL BASED ON SMOLT PHYSIOLOGICAL STATUS

- 11.50 Mark Schumann**, Cornelius Becke, Andreas Müller-Belecke, Roland Rösch
RAINBOW TROUT WELFARE INDEX MODEL 1.0
- 12.10 Jian Zhao**, Shengyu Hang, Yanci Wen, Songming Zhu, Zhangying Ye
DEEP LEARNING-BASED MONITORING OF THE LOCAL UNUSUAL BEHAVIORS FOR FISH SCHOOL IN INTENSIVE AQUACULTURE
- 12.30 Jeroen Brijs**, E. Sandblom, M. Axelsson, K. Sundell, H. Sundh, A. Kiessling, C. Berg, A. Gräns
REMOTE MONITORING OF CARDIOVASCULAR PERFORMANCE TO GAUGE STRESS RESPONSES OF RAINBOW TROUT *Oncorhynchus mykiss* IN AQUACULTURE
- 12:50 LUNCH**
- 14.30 Alexander Jaramillo-Torres**, Torunn Forberg, Elvis Chikwati, Armin Kousha, Abdelaziz Adam Mohammed, Yanxian Li, Åshild Krogdahl, Trond M. Kortner
MICROBIOTA-RELATED INDICATORS OF GUT HEALTH IN ATLANTIC SALMON *Salmo salar*
- 14.50 Jessica Petereit**, C. Hörterer, R. Pastres, L. Conceição, J. Johansen, J. Aerts, B.H. Buck
THE EFFECT OF ALTERNATIVE FEED INGREDIENTS ON GROWTH AND STRESS RESPONSE IN JUVENILE TURBOT *Scophthalmus maximus* KEPT IN RECIRCULATING AQUACULTURE SYSTEMS
- 15.10 Francisco Guardiola**, Martha Reyes-Becerril, Verónica Sánchez, Carlos Angulo
YEASTS β -GLUCANS IMPACT ON IMMUNE RESPONSE IN PLASMA AND SKIN MUCUS OF PACIFIC RED SNAPPER *Lutjanus peru* CHALLENGED WITH *Aeromonas hydrophila*
- 15.30 Lluís Tort**, Annais Carbajal, Felipe E. Reyes-Lopez, Oriol Tallo-Parra, Manel López-Béjar
CORTISOL IN PLASMA, SKIN MUCUS AND SCALES. A COMPARATIVE VIEW OF THE HYPOTHALAMIC-PITUITARY-INTERRENAL AXIS ACTIVITY IN DIFFERENT FISH MATRICES
- 15.50 Linda Tschirren**, Nicola Rhyner, Andreas Seitz, Constanze Pietsch
GENE EXPRESSION LEVELS IN DISTINCT BRAIN AREAS OF CARPS AFTER POSITIVE AND NEGATIVE ACUTE STRESSORS
- 16.10 Raminta Kazlauskaitė**, Bachar Cheaib, Joshka Kaufmann, Chloe Heys, Alex Kitts, Martin Llewellyn
SALMOSIM: BUILDING ARTIFICIAL ATLANTIC SALMON *Salmo salar* GUT SYSTEM
- 16.30 Luis André Barbas**, Jheneff Feitosa, Marcelo Torres, Brenda Costa, Moisés Hamoy
EUGENOL INDUCES A SEIZURE-LIKE STATE DURING SHORT-TERM EXPOSURE IN FISH
- 16.50 Maureen Ellis**, L. Dunn, M. Haskell, S. Jarvis, S. Rey, J.F. Turnbull
NOVEL USE OF QUALITATIVE BEHAVIOUR ASSESSMENT TO MONITOR WELFARE IN FARMED ATLANTIC SALMON *Salmon salar*
- 17.10 Lina Weirup**, Johan Aerts, Carsten Schulz, Henrike Seibel
ASSESSMENT OF CHRONIC STRESS AND WELFARE STATUS IN RAINBOW TROUT *Oncorhynchus mykiss* AT DIFFERENT STOCKING DENSITIES IN COMMERCIAL FLOW-THROUGH SYSTEMS IN GERMANY

AE2019 INDUSTRY FORUM – GERMAN FARMERS' DAY

Tuesday, October 8 10.30 - 17.30 Exhibition 1

Chair: Stefan Meyer

TUESDAY

- 10.30 Bernhard Feneis**
WELCOME FROM VDBA
- Birgit Schmidt-Puckhaber**
WELCOME FROM DLG
- 10.50 Birgit Schmidt-Puckhaber**
PRODUCTION SYSTEMS IN EUROPE - HOW DO WE PRODUCE TOMORROW?
- 10.50 Bernhard Feneis,**
POLITICAL AND SOCIETAL FRAMEWORK CONDITIONS - EUROPEAN AQUACULTURE PRODUCERS' PERSPECTIVE
- 11.20 Daniel arski,**
TOWARD INNOVATION IN POND-BASED PRODUCTION TECHNOLOGY
- 11.35 Gert Füllner**
CARP POND CULTURE - OUTDATED OR FUTURE TECHNOLOGY?
- 11.50 Martin Oberle,**
COMPOSITION AND MINERALIZATION OF CARP POND SOIL
- 12.05 Jan Masilko**
HORSEBEAN AS FEED STUFF FOR COMMON CARP - INFLUENCE ON GROWTH AND FLESH QUALITY
- 12.20 Andreas Müller-Belecke**
INTENSIVE CARP FRY PRODUCTION - IMPROVING PERFORMANCE AND EFFICIENCY WITH STATE-OF-THE-ART FEED AND TECHNOLOGY
- 12.35 Szymon Łakomiak,**
FROM SALMONIDS TO STURGEONS - SECOND LIFE OF OUTDATED TROUT PRODUCTION SYSTEMS
- 12.50 LUNCH**
- 14.10 Werner Kloas**
NEW SOLUTIONS FOR "OLD" PROBLEMS
- 14.10 Alexander Tautenhahn**
HEALTHY FISH - STRATEGIES TO REDUCE FISH LOSSES
- 14.40 Thomas Wachinger**
SHARING INSIGHTS FROM A BAVARIAN INDOOR-RAS FARM FOR TROPICAL SHRIMP PRODUCTION
- 14.55 Paul Sindilariu**
RAS - FUTURE FOR SWISS AQUACULTURE?

- 15.10 Dominik Ewald**
USE OF DIGITAL SYSTEMS IN AQUACULTURE - ARE WE READY FOR "BIG DATA"?
- 15.25 BREAK**
- 15.50 Stefan Meyer**
ANIMAL WELFARE AND CONSUMER ACCEPTANCE
- 15.50 Helmut Wedekind**
SCIENCE-BASED INSIGHTS INTO ANIMAL WELFARE IN AQUACULTURE
- 16.10 Johannes Simons**
ENJOY FISH! A GERMAN TROUT CASE STUDY ON CONSUMER ACCEPTANCE FOR FISH PRODUCTS FROM AQUACULTURE
- 16.30 Stefan Johnigk, Bernhard Feneis, Stefan Hofer**
"FUTURE PERSPECTIVES..." - ROUND TABLE DISCUSSION

RECIRCULATING AQUACULTURE SYSTEMS (RAS)

Tuesday, October 8 14.30 - 17.30 Room 1

Chairs: Astrid Buran Holan, Carlos Octavio Letelier Gordo

- 14.30 Paula Rojas-Tirado, Åse Åtland, Carlos Letelier-Gordo**
THE EFFECT OF DIFFERENT WATER SOURCES ON THE POTENTIAL H₂S-FORMATION WITHIN RAS
- 14.50 Ragnhild Fossmark, Kari Attramadal, Trond Rosten, Deni Koseto, Jenny Nesje, Ingrid Bakke, Niels Jørgensen, Gema Raspati, Stein Østerhus, Olav Vadstein**
MICROBIAL COMMUNITY DYNAMICS IN RECIRCULATING AQUACULTURE SYSTEMS REARING ATLANTIC SALMON PARR *Salmo salar* WITH REDUCED ORGANIC LOADING THROUGH MEMBRANE FILTRATION
- 15.10 Jeremiah Minich, Khattapan Jantawongsri, John Bowman, Abigail Elizur, Stewart Fielder, Rob Knight, Eric Allen**
HATCHERY SYSTEM (RAS VS FT) EFFECTS ON FISH MICROBIOTA FOR ATLANTIC SALMON *Salmo salar* AND YELLOWTAIL KINGFISH *Seriola lalandi*
- 15.30 Felipe do Nascimento Vieira, Frederike Schmachtl, Mirko Boegner, Ana Clara C. da Silva, Vitor F. Silva, Walter Q. Seiffert, Cláudia Machado, Daniele dos Santos, Gabriela S. Ferreira**
STRATEGIES FOR WATER PREPARATION IN A BIOFLOC SYSTEM: EVALUATION OF A CHEMOAUTOTROPHIC, HETEROTROPHIC AND MATURE SYSTEM FOR PACIFIC WHITE SHRIMP REARING
- 15.50 Desislava Bögner, Mirko Bögner, Fredericke Schmachtl, Nicolas Bill, Jörn Halfer, Kai Lorkoswki, Matthew J. Slater**
DEMYSTIFYING CRITICS ABOUT HYDROGEN PEROXIDE UTILIZATION IN RECIRCULATING AQUACULTURE SYSTEMS

- 16.10 Wanhe Qi**, Songming Zhu
LOW CONCENTRATION PMS/UVA-LED COMBINATION AS A POTENTIAL ALTERNATIVE
DISINFECTION METHOD FOR RECIRCULATING AQUACULTURE SYSTEMS
- 16.30 Angela Boley**, Wolf-Rüdiger Müller
EVALUATION OF A MEMBRANE-DENITRIFICATION REACTOR (MDR) IN A
RECIRCULATION AQUACULTURE SYSTEM UNDER REAL CONDITIONS
- 16.50 Jaime Orellana**, Silvia Gómez, Felipe Hurtado
BIOREMEDIATION OF ORGANIC SLUDGE FROM A MARINE RECIRCULATING
AQUACULTURE SYSTEM USING THE POLYCHAETE *Abarenicola pusilla*
- 17.10 Alberto Monteleone**, Shane Hunter, Simeon Deguara
AQUABIOTECH GROUP – ABT INNOVIA: EXCELLENCE THROUGH QUALITY AND
INNOVATION

MICROALGAE

Tuesday, October 8 14.30 - 17.30 Festival

Chair: Kjell Inge Reitan

- 14.30 Dorinde M.M. Kleinegriss**, Jeroen H. de Vree, Pia Streinrücken, Hanna Böpple,
Hans T. Kleivdal
THE NATIONAL ALGAEPILOT MONGSTAD: PRODUCTION OF MICROALGAE FOR
AQUACULTURE
- 14.50 Mariluz Bagnoud**, Alexandre Bagnoud, Cyril Mahmed, Roger Röthlisberger, Saloua Sadok
INTEGRATION OF A NEW PHOTOSYNTHETIC BIOFILM FILTER IN RECIRCULATING
AQUACULTURE SYSTEMS AND DIRECT BIOMASS RECOVERY
- 15.10 Robert Röllig**, Harry W. Palm, Adrian Bischoff-Lang, Hilary Jane Lewis Karlson,
Malene Fog Lihme Olsen, Lars Jørgensen
MICROALGAE CULTIVATION FOR BIOREMEDIATION OF NUTRIENTS UNDER AQUAPONIC
CONDITIONS
- 15.30 A. Roulston**, S. Glover, J. Long, R. Roulston
COMPACT PHOTOBIOREACTORS FOR LIVE MICROALGAE PRODUCTION IN
AQUACULTURE HATCHERIES AND NURSERIES
- 15.50 Christos Latsos**, Pieter Oostlander, Gabrielle Verbeeke, Maria Barbosa, Rene Wijffels,
Jasper van Houcke
Rhodomonas salina PRODUCTION: GOING FROM LAB TO SEMI-COMMERCIAL SCALE
- 16.10 Hideaki Matsui**, Satoshi Kono, Kazuki Okita, Tomonari Kotani
THE MICROALGA *Isochrysis* AS AN ENRICHMENT DIET FOR ROTIFERS: EFFECTS OF
HARVEST TIMING ON ROTIFER VITALITY AND FATTY ACID PROFILES
- 16.30 Ana Viskovic**, Francisco Guardiola, Inês Alexandra Sa, Marina Machado, Filipa Fontinha,
Rita Azeredo, Benjamin Costas, Ana Couto
EVALUATION OF HEALTH STATUS IN EUROPEAN SEA BASS *Dicentrarchus labrax* L.
JUVENILES FED DIETS WITH PARTIAL REPLACEMENT OF FISH MEAL BY MICROALGAE
MEAL

- 16.50 Ifakat Tülay Çagatay**, Mehmet Özbas, Noha Sati, Hasan Emre Yilmaz
ANTIMICROBIAL ACTIVITY OF *Nannochloropsis* spp. AGAINST FISH PATHOGENS
- 17.10 Joseph Penhaul Smith**, C. Beveridge, V.A. Laudicello, L. McEvoy, A.D. Hughes, J.G. Day
MICROALGAL MIXOTROPHY AS A SOURCE OF FEED FOR *Mytilus edulis* LARVAE

PERFORMFISH / MEDAID INDUSTRY FORUM

Tuesday, October 8 14.30 - 17.30 Exhibition 2

Chairs: Katerina Moutou, Bernardo Basurco

- 14.00 Katerina Moutou**, Alicia Estévez
PerformFISH and **MedAID**: TWO YEARS LATER
- 14.20 Leonidas Papaharis**, Kantham Papanna, Dimitrios Chatziplis, Valia Economou, Tereza Manousaki, Costas S. Tsigenopoulos
INCREASING DISEASE RESISTANCE OF FISH FOR PARASITES THROUGH BREEDING: THE CASE OF THE EUROPEAN SEA BASS AGAINST THE MONOGENEAN *Diplectanum aequans* AND THE COPEPOD *Lernanthropus kroyeri*
- Costas Tsigenopoulos**
HERITABILITY ESTIMATES FOR DISEASE RESISTANCE IN EUROPEAN SEA BASS: OPEN SEA CHALLENGES TO MONOGENEAN PARASITES *Diplectanum aequans* AND *Lernanthropus kroyeri*
- 14.50 Kostas Tzokas, George Koumoundouros**
DO ALL DEFORMITIES MATTER?
- 15.10 Javier Villa, Nikos Papandroulakis**
NOVEL TECHNOLOGY TO IMPROVE FEEDING MANAGEMENT
- 15.30 Giovanna Marino, Dane Desnica**
KEY PERFORMANCE INDICATORS FOR EFFICIENT BENCHMARKING IN MEDITERRANEAN AQUACULTURE
- 15.50 José Pérez**
SOCIAL ACCEPTABILITY AND GOVERNANCE. STAKES, CHALLENGES AND RECENT EXPERIENCES
- 16.10 José L. Fernández Sánchez**
ECONOMIC FINDINGS IN PRODUCTION AND MARKETS OF MEDITERRANEAN AQUACULTURE
- 16.30 María Soledad Izquierdo López**
OPEN DISCUSSION AND CONCLUSIONS

STUDENT WORKSHOP

EAS Avengers – AquaIndustry Challenges

Tuesday, October 8 14.30 - 17.30 Foyer 4

Chair: Kathrin Steinberg

TUESDAY

- 14.30 Kathrin Steinberg**
Welcome
- 14.40 Ana Nobre – SPAROS**
FEEDNETICS as a tool for students and young professionals
- 15.00 EAS SG Travel Grant Winners** - Industry and Research Experiences
Ana Costa
Kerrie Ni Dufaigh
Rodrigo Mendes
Sandra Langi
Sofiiia Tretiak
- 15.20 Kunststoff Spranger**
- 15.40 EAS SG National Coordinators**
Status of Aquaculture, Irene Brandts (Spain)
Ivo Monteiro (Portugal)
Pauline Wischhusen (France)
Guido Bonello (Italy)
Elisavet Syropoulou (Greece)
- 16.05 Lourdes Reig and Rosa Flos (UPC)**
How students perceive aquaculture: should we be worried? How could it be approached from the curricula?
- 16.25 Andrew Richardson (NC)**
Issues and Problems within the Industry
- 16.40 Ideas and Solutions for the Industry**
Group Discussions and Networking
- 17.20 Aideen Kearney (NC), Silvia Blanco (NC)**
Outlook to Ireland for AE2020

GENERAL CONTRIBUTED HEALTH

Tuesday, October 8 14.30 - 17.30 Lounge 1-3

Chair: TBA

- 14.30 Sebastian Rakers**, Lisa Jordan, Mikolaj Adamek, Dirk Scheel, Anna Becker, Marina Gebert
CELL MODELS FOR THE DEVELOPMENT OF VACCINES FOR AQUACULTURE FISH
- 14.50 Kerrie Ní Dhufaigh**, Eugene Dillon, Eugene MacCarthy, Orla Slattery
BIOCHEMICAL AND PROTEOMIC CHARACTERISATION OF EXTRACELLULAR PROTEINS FROM THE PROTOZOAN PARASITE *Paramoeba perurans* REVEALED BY AN *IN VITRO* MODEL
- 15.10 Dongdong Wang**, Gilbert Van Stappen, Nancy Nevejan
FOLLOWING THE INFECTION PROCESS OF VIBRIOSIS IN PACIFIC OYSTER *Crassostrea gigas* AND BLUE MUSSEL *Mytilus edulis* LARVAE USING FLUORESCENCE LABELING AND HISTOPATHOLOGY METHODS
- 15.30 David Straus**, T. Meinelt, D. Liu, L.-F. Pedersen, C. Good, J. Davidson
A RETROSPECTIVE OF OUR INTERNATIONAL RESEARCH COLLABORATION ON THE USE OF PERACETIC ACID IN AQUACULTURE
- 15.50 Luisa M. Vera**, Eric Leclercq, Karina Gajardo, Mathieu Castex, Hervé Migaud
DEVELOPMENT OF A PRACTICAL REPETITIVE STRESS CHALLENGE MODEL FOR SEAWATER ATLANTIC SALMON *Salmo salar*
- 16.10 Uun Yanuhar**, Nico Rahman Caesar, Feri Setiawan, Muhammad Musa
IDENTIFICATION OF *Chlorella* sp. USING THE INTERNAL TRANSCRIBED SPACER SEQUENCE AND ITS ROLE AS INHIBITOR STRESS CAUSED BY RNA VIRAL NERVOUS NECROSIS INFECTION ON THE HUMPBACK GROUPER

WEDNESDAY, October 9

PLENARY 2

Wednesday, October 9 09.00 - 10.00 Europe Hall

Chair: Stefan Meyer

09.00 Alexander Wever

PRODUCER, TRADE AND CONSUMER – A PRESENTATION/PANEL SESSION

10:00 BREAK

NUTRITION: ANIMAL INGREDIENTS IN AQUAFEED

Wednesday, October 9 10.30 - 12.50 Europe Hall

Chair: Luisa Valente

Sponsored by



10.30 Ana Basto, Margarida R.G. Maia, Jaume Perez-Sanchez, Josep Calduch, Elisabete Matos, Luísa M.P. Valente

DEFATTED YELLOW MEALWORM *Tenebrio molitor* LARVAE MEAL: A PROMISING FISHMEAL SUBSTITUTE FOR EUROPEAN SEABASS

10.50 Constant Motte, Morgane Henry

REPLACING FISH MEAL WITH DEFATTED INSECT MEAL (YELLOW MEALWORM *Tenebrio molitor*) IMPROVES THE GROWTH AND IMMUNITY OF EUROPEAN SEABASS *Dicentrarchus labrax* L.

11.10 Mónica Costa, Benjamin Costas, Marina Machado, Carla Teixeira, Sergio Fernández-Boo, Tiago Sá, Sónia Batista, Alexandra Marques, Fernando Miranda, Luísa M.P. Valente

ANCHOVY AND GIANT SQUID HYDROLYSATES CAN ENHANCE GROWTH AND THE IMMUNE RESPONSE OF EUROPEAN SEABASS *Dicentrarchus labrax* FED VEGETABLE BASED-DIETS

11.30 Luisa Valente, Inês Campos, Elisabete Matos

LOCALLY PROCESSED LAND ANIMAL BY-PRODUCTS AS POTENTIAL CANDIDATES TO REPLACE FISHMEAL AND FISH OIL IN PRACTICAL DIETS FOR EUROPEAN SEABASS

11.50 Elisabete Matos, Inês Campos, Luísa M.P. Valente, Pedro Marques, Fausto Freire

LIFE-CYCLE ASSESSMENT OF ANIMAL FEED INGREDIENTS: POULTRY FAT, POULTRY BY-PRODUCT MEAL AND HYDROLYZED FEATHER MEAL

12.10 Jessica Jaxion-Harm

EFFECTS OF DIETARY PHOSPHOLIPIDS ON EARLY STAGE ATLANTIC SALMON *Salmo salar* PERFORMANCE: A COMPARISON AMONGST PHOSPHOLIPID SOURCES

12.30 Gabriella Do Vale Pereira, Felipe Soares, Ana Margarida Fernandes, Tome Silva, Bruna Silva, Jorge Dias, Bela Buck, Johan Johansen, Luis Eugenio Castanheira Conceicao

ASSESSMENT OF SUSTAINABLE AQUAFEED FORMULATIONS USING TWO APPROACHES: GROWTH TRIAL AND A DYNAMIC NUTRIENT-BASED MATHEMATICAL MODEL

FOOD QUALITY AND SAFETY

Wednesday, October 9 10.30 - 12.50 Room 5

Chair: Johannes Pucher

10.30 Valeska Weymann

EFFICIENT GUIDE TO PRODUCERS FOR GOOD AQUACULTURE PRACTICES AT ALL STAGES OF PRODUCTION

10.50 Miguel Angel Pardo, Andrea Gustinelli, Monica Caffara, Maria Letizia Fioravanti, Kurt Buchmann, Santiago Pascual, George Rigos, Csaba Székely, Diana Sandor, Gabor Cech

A EUROPEAN SURVEY ON ZONOTIC HELMINTHS REVEALS A NEGLIGIBLE RISK OF INFECTION FROM FARMED FISH TO HUMANS

11.10 Andrew D. Younger, Robson V. de Sousa, Mickael Teixeira Alves, Carlos Campos

AN INVESTIGATION OF HOW THE CLASSIFICATION STATUS OF SHELLFISH PRODUCTION AREAS MAY BE AFFECTED BY THE NUMBER OF *Escherichia coli* RESULTS ASSESSED

11.30 Christian Schlechtriem

INVESTIGATIONS ON NATURE AND LEVEL OF RESIDUES IN FARMED FISH AS PART OF THE EUROPEAN PESTICIDE REGULATION

11.50 Johannes Pucher, K. EL Arbani, E. Strauch

MICROBIAL COMMUNITIES IN BIOFLOC SYSTEMS FOR WHITELEG SHRIMP *Litopenaeus vannamei*

12.10 Y.D. Ahongo, T. Kerneis, L. Goardon, L. Labbé, J. Bugeon, P-Y. Rescan, F. Lefèvre

FLESH QUALITY RECOVERY IN FEMALE RAINBOW TROUT *Oncorhynchus mykiss* AFTER EGG PRODUCTION

12.30 Olajumoke Omosowone, Sunday Olatoye

BIOACTIVITY OF GARLIC *Allium sativum* AGAINST *Dermestes maculatus* ON SMOKE-DRIED AFRICAN CATFISH *Claris gariepinus*

SUSTAINABLE AQUACULTURE TECHNOLOGIES

Wednesday, October 9 10.30 - 12.50 Lounge 1-3

Chair: Alexander Brinker

10.30 Pauline O'Donohoe, Frank Kane, Joanne Casserly, Sean McLoughlin

TOOLS FOR NEW AND FLEXIBLE APPROACHES FOR AQUACULTURE LICENSING AND REGULATION

10.50 Kristina Bergman, Patrik Henriksson, Sara Hornborg, Max Troell, Malin Jonell, Friederike Ziegler

FARMING WARMWATER FISH ON LAND IN A COLD COUNTRY – A CRAZY IDEA OR A NEW SUSTAINABLE SEAFOOD SUPPLY CHAIN?

11.10 Hallstein Baarset, Johan Johansen

ECOINTENSIFICATION OF AQUACULTURE: INNOVATIVE MORTALITY DISPOSAL IN A CIRCULAR ECONOMY PERSPECTIVE

- 11.30 Rui Rocha**, Sílvia Pires, Diogo Martins, Andreia Rodrigues, Pearl Ofoegbu, Vitória Pereira, Ana Costa, Amadeu Soares
COCKLES HARVESTING, TRANSPORT AND PACKAGING: HOW TO IMPROVE THE QUALITY OF PRODUCT IN CONSUMERS TABLE
- 11.50 Anneliese Ernst**, Patrick Maurer, Uwe Waller
SOURCES AND SINKS OF BACTERIA IN RECIRCULATING AQUACULTURE SYSTEMS (RAS)
- 12.10 Thomas Adams**, Dmitry Aleynik, Andrew Dale, Max Holloway, Keith Davidson
CHOOSING THE BEST LOCATIONS FOR SALMON AQUACULTURE SITES: INSIGHTS FROM BIOPHYSICAL MODELS AND THE MOVE TO MORE EXPOSED SITES
- 12.30 Langley Gace**
THE CRITICAL SUCCESS FACTORS OF AN OPEN OCEAN FARMING OPERATION

GENERAL CONTRIBUTED FISH WELFARE

Wednesday, October 9 10.30 - 12.50 Backstage 1

Chair: Lina Weirup

- 10.30 Joan Martorell-Ribera**, Mareen Nipkow, Torsten Viergutz, Christian Plinski, Tom Goldammer, Ulrike Gimsa, Alexander Rebl
STRESS HORMONES EVOKE CHARACTERISTIC EXPRESSION PROFILES IN SALMONID HEAD KIDNEY CELLS UNDER IMMUNE STIMULATION
- 10.50 Constanze Pietsch**, Andreas Seitz, Nicola Rhyner, Marcel Arter, Linda Tschirren
NEW INSIGHTS INTO THE APPETITE GENE REGULATION IN COMMON CARP *Cyprinus carpio*
- 11.10 Asa Johannesen**, Pascal Klebert, Øystein Patursson
THE EFFECT OF WAVES ON VERTICAL DISTRIBUTION OF SALMON IN AN EXPOSED SALMON CAGE
- 11.30 Susana M.F. Ferreira**, Ana F. Ruas, Adriana G. Gaveta, Sílvia C. Gonçalves
ASSESSMENT OF FEED DOSES TO BE ADMINISTERED TO *Garra rufa* (HECKEL, 1843) UNDER AN ICTHYOTHERAPY REGIMEN
- 11.50 M. Carla Piazzon**, Fernando Naya-Català, Josep A. Calduch-Giner, Paula Simó-Mirabet, Amparo Picard-Sánchez, Ariadna Sitjà-Bobadilla, Jaume Pérez-Sánchez
SEX, AGE AND BACTERIA: HOW THE INTESTINAL MICROBIOTA IS MODULATED IN A PROTANDROUS HERMAPHRODITE FARMED FISH
- 12.10 Josip Barisic**, Brian Quinn, S. Cannon
BLOOD BIOCHEMISTRY DURING SEAWATER TRANSFER: INVESTIGATION INTO THE CAUSES OF FAILED FISH SYNDROME IN RAINBOW TROUT *Oncorhynchus mykiss*
- 12.30 Erik Sandblom**, Henrik Seth, Brankica Djordjevic, Lars Niklasson, Henrik Sundh, Bo Algers, Lotta Berg, Torbjörn Lundh, Michael Axelsson, Jeffrey Lines, Snuttan Sundell, Albin Gräns, Anders Kiessling
STUNNING OF ARCTIC CHAR *Salvelinus alpinus* WITH CARBON DIOXIDE AND ELECTRIC FIELD EXPOSURE: PHYSIOLOGICAL MECHANISMS OF ACTION AND WELFARE IMPLICATIONS

PRECISION FARMING, AI AND BIG DATA

Wednesday, October 9 10.30 - 16.30 Festival

Chair: Martin Fore

WEDNESDAY

- 10.30 Mohammadmehdi Saberioon**, Petr Cisar, Laurent Labbé, Pavel Soucek, Pablo Pelissier
APPLICATION OF HYPERSPECTRAL IMAGERY TO DISCRIMINATE DIFFERENT DIETS OF LIVE RAINBOW TROUT *Oncorhynchus mykiss*
- 10.50 Dinara Bekkozhayeva**, Mohammadmehdi Saberioon, Petr Cisar
INDIVIDUAL PHOTO-IDENTIFICATION OF FISH WITH VISIBLE SKIN PATTERNS (SUMATRA BARB *Puntigrus tetrazona*) USING COMPUTER VISION
- 11.10 Petr Cisar**, Mohammadmehdi Saberioon, Dinara Bekkozhayeva, Rudolf Schraml
COMPUTER VISION BASED FISH INDIVIDUAL IDENTIFICATION AS AN ALTERNATIVE TO FISH TAGGING
- 11.30 Christian Schellewald**, A. Stahl, O. Markovic, M. Markovic, I. Hammerset, E. Moen, H. Trengereid, L.M. Sunde
TOWARDS AN INDIVIDUAL CHARACTERISATION OF FARMED SALMON
- 11.50 Joao G. Ferreira**, Nick Taylor, Alhambra Cubillo, Joao Lencart e Silva, Roberto Pastres, Øivind Bergh, Nicola McPherson, James Guildler
THE ABC MODEL – A PARADIGM SHIFT IN INTEGRATED CARRYING CAPACITY MODELLING
- 12.10 Stepan Papacek**, Petr Cisar, Karel Petera
CFD SIMULATION OF FLUID FLOW AND RTD ANALYSIS FOR AQUACULTURE SYSTEMS: WITH AND WITHOUT FISH
- 12.30 Fearghal O'Donncha**, Scott C. James
A MACHINE-LEARNING-BASED APPROACH TO FORECAST HARMFUL ALGAL BLOOMS
- 12:50 LUNCH**
- 14.30 René Alvestad**, Kristian H. Liland, Ingrid Måge, Chris Noble, Bjørn-Steinar Sæther
CHARACTERISTICS AND QUALITY OF PRODUCTION DATA IN AN ATLANTIC SALMON *Salmo salar* L. PRODUCER'S LEGACY DATABASE
- 14.50 Petter Olsen**
SHOULD THE AQUACULTURE INDUSTRY USE BLOCKCHAIN TECHNOLOGY FOR DATA RECORDING?
- 15.10 Jon Grant**, R. Figueira, M. Burke, C. Stockwell, E. Milos, L. Torgo, F. Donncha
FISH FARM SENSORS AND THE INTERNET OF THINGS
- 15.30 Vagelis Chalkiadakis**, George Livanos, Michalis Zervakis, Konstantia Moirogiorgou, Nikos Papandroulakis
AN AUTONOMOUS UNDERWATER VEHICLE FOR AUTOMATED INSPECTION OF AQUACULTURE NET PEN CAGES

- 15.50 Eleni Kelasidi**, Biao Su, Martin Føre, Kevin Frank, Walter Caharija, Christian Schellewald, Leif Magne Sunde
AUTONOMOUS UNDERWATER ROBOTS FOR SAFER AND MORE EFFICIENT OPERATIONS IN FISH FARMS
- 16.10 Maxime Lafont**, Ambre Vallauri, Samuel Dupont, Charlotte Dupont
DIGITIZATION OF AQUACULTURE: REAL-TIME MONITORING AND PREDICTION FOR A SUSTAINABLE FUTURE

ENVIRONMENT / AQUACULTURE INTERACTIONS – FROM AND TO AQUACULTURE

Wednesday, October 9 10.30 - 17.30 Room 1

Chair: Shawn Robinson

- 10.30 Christopher Naas**, Werner Kloas
META-ANALYSIS OF GROWTH PERFORMANCE OF FRESHWATER FISHES UNDER SALINE ENVIRONMENTS IN AQUACULTURE
- 10.50 Renée K. Bechmann**, Maj Arnberg, Emily Lyng, Stig Westerlund, Shaw Bamber, Alessio Gomiero, Thorleifur Agustsson, Alfhild Kringstad, Les Burr ridge
SENSITIVITY OF NORTHERN SHRIMP *Pandalus borealis* TO COMMERCIAL FORMULATIONS USED AS ANTI-PARASITIC DRUGS
- 11.10 Vidar Wennevik**, Kevin Glover, Ola Diserud, Øystein Skaala, Peder Fiske, Monica Solberg, Kjetil Hindar, Terje Svåsand, Sten Karlsson, Lasse Andersen, Ellen Grefsrud
ENVIRONMENTAL IMPACTS OF AQUACULTURE: ASSESSING THE RISK OF FURTHER GENETIC INTRODUCTIONS OF DOMESTICATED SALMON IN WILD POPULATIONS IN NORWAY
- 11.30 Erika M.D. Porporato**, Mattia Andreoletti, Giuseppe Arcangeli, Daniele Brigolin, Roberto Pastres
USING SATELLITE DATA FOR ASSESSING THE RISK OF FAECAL BACTERIA CONTAMINATION IN MUSSEL FARMS
- 11.50 Jurica Jug-Dujakovic**, Damir Kapetanovic, Snježana Kazazic, Anamarija Kolda, Darija Vukic Lušic, Ana Gavrilovic
SEASONAL VARIATIONS IN THE ABUNDANCE OF *Vibrio* sp. IN THE MARINE CAGE FARM AREA OF MALI STON BAY, EASTERN ADRIATIC
- 12:50 LUNCH**
- 14.30 Shawn Robinson**, Benjamin Forward, Terralynn Lander, Jonathan Day
TRACKING THE MICROBIOME IN INVERTEBRATES AS A TOOL FOR OPTIMIZING CULTURE CONDITIONS
- 14.50 Johannes Müller**, Natacha Nogueira, Carlos Andrade
THE REASONS BEHIND THE ESCAPES OF *Sparus aurata* FROM MADEIRA ISLAND (PORTUGAL) FISH FARMS – RISK ASSESSMENT THROUGH THE ANALYSIS OF ARCHIVE DATA

- 15.10 Arnaldo Atucha**, Nuria García Bueno
RELATIONSHIP BETWEEN MODELS OF DISPERSION OF ORGANIC WASTE FROM FISH FARM AND THE VARIATION OF THE ISOTOPE NICHE AND BIOACCUMULATION OF TRACE ELEMENTS IN BIOFILM
- 15.30 Tale Skrove**, Yngvar Olsen
EFFECTS OF NUTRIENT EMISSIONS FROM AN EXPOSED FISH FARM ON THE UPPER WATER COLUMN
- 15.50 Peter Cranford**, Lindsay Brager, Deanva Elvines
TOWARDS A REVISED CLASSIFICATION SCHEME DESCRIBING BENTHIC IMPACTS OF MARINE AQUACULTURE BASED ON SEDIMENT GEOCHEMISTRY
- 16.10 Brent A. Law**, Paul S. Hill, Adam Drozdowski, Fred Page
PROOF-OF-CONCEPT APPLICATION OF THE BENTHIC BOUNDARY LAYER TRANSPORT (BBLT) MODEL TO SALMON AQUACULTURE WASTE DISPERSAL
- 16.30 Alessio Gomiero**, Kjell Birger Øysæd, Marte Haave, Tanja Kogel, Mona Gjessing, Trygve Berg Lea, Catarina Martens, Trude Olafsen
TRACKING OF PLASTIC EMISSIONS FROM AQUACULTURE INDUSTRY
- 16.50 Marcelo Hidalgo**, Michiel Fransen
MINIMIZING THE IMPACT OF MARINE LITTER AND AQUACULTURE GEAR IN THE AQUACULTURE INDUSTRY GLOBALLY
- 17.10 Maitri Thakur**, Wenhao Chen, Shraddha Mehta, Nicholas Holden, Gudrun Olafsdottir
IMPACT HOTSPOT ANALYSIS OF THE NORWEGIAN FARMED SALMON VALUE CHAIN

AQUAPONICS AND IMTA - CONTINUED

Wednesday, October 9 10.30 - 17.30 Room 2

Chairs: Ben Kozen, Hendrik Monsees

- 10.30 Benz Kotzen**
'WHEREFORE ART THOU AQUAPONICS – THE HERD OF ELEPHANTS IN THE ROOM':
FUTURE AQUAPONICS IN EUROPE TOWARDS SURVIVAL GROWTH AND SUCCESS
- 10.50 H.W. Palm**, U. Knaus, S. Appelbaum, G. Burnell, B. Kotzen
THE NEW DEFINITION OF AQUAPONICS: FUTURE PERSPECTIVES AND CONSTRAINTS
- 11.10 Hendrik Monsees**, Johanna Suhl, Maurice Paul, Werner Kloas, Dennis Dannehl, Sven Wuertz
LETTUCE (*Lactuca sativa*, VARIETY SALANOVA) PRODUCTION IN DECOUPLED AQUAPONIC SYSTEMS
- 11.30 Mathilde Eck**, Iris Szekely, Sébastien Massart, M. Haïssam Jijakli
STUDY OF THE EVOLUTION OF MICROORGANISMS COMMUNITIES IN AN AQUAPONIC SYSTEM OVER THE COURSE OF A FULL LETTUCE GROWTH CYCLE
- 11.50 Thomas Tomson**, M. Haïssam Jijakli
SAPRISTI, AN INNOVATIVE MODULAR TOOL IN THE IMPLEMENTATION OF A METHODOLOGY FOR THE RECOVERY OF FISH FARMING EFFLUENT BY AQUAPONICS

- 12.10 Nikos Vlahos**, Ioannis Mitsopoulos, Kostas Babouklis, Emmanouil Kapetanios, Stavros Frangou, Anastasios Manolios, Kalliopi Giannoulataou, Eirini Mardoglou
DESIGN, AQUASCAPE AND CONDITIONING OF A BRACKISH AQUAPONICS SYSTEM
- 12.30 Anton Rossbach**
FRESH-WATER-PRODUCING SEAWATER-AQUAPONICS AS A SOLUTION FOR THE DRAUGHT IN THE NORTHEAST OF BRAZIL
- 12.50 LUNCH**
- 14.30 Benoît Stalport**, Pierre Raulier, Nicolas De Cock, Frédéric Lebeau, M. Haïssam Jijakli
DEVELOPMENT OF AN INDIVIDUAL-BASED GENERIC AQUAPONIC MODEL USING OBJECT ORIENTED PROGRAMMING
- 14.50 Raulier Pierre**, Benoît Stalport, Frederic Lebeau, Doriane Stagnol, Caroline Bini, Bart Leenknecht, Thomas Abeel, Sara Crappé, Nick Pannecouque, Germain Desmet, Christophe Hermans, Noémie Lardinois, Charlotte Boeckeaert, Herinaina Andriandroso, Jad Nassard, Bertrand Vandoorne, Vincent Lefevere, Haïssam Jijakli
SMART AQUAPONICS: DEVELOPMENT OF A TOOL FOR EDUCATION, DECISION SUPPORT AND MONITORING FOR AQUAPONICS
- 15.10 Alexander Boedijn**, Esteban Baeza, Rob Van den Ven, Carlos Espinal, Ragnheidur Thorarinsdottir, Maja Turnšek
MODELLING AND DIMENSIONING AQUAPONICS AS THERMAL TREATMENT NETWORKS THAT OPTIMIZE GEOTHERMAL ENERGY USE
- 15.30 Simon Goddek**, Alyssa Joyce, Oliver Koerner, Karel Keesman
A FULLY INTEGRATED SIMULATION MODEL OF MULTI-LOOP AQUAPONICS: PUTTING THEORY INTO PRACTICE
- 15.50 Edson Panana**, B. Delaide, P. Bleyaert, S. Teerlinck
ORGANIC REDUCTION AND NUTRIENT RECOVERY PERFORMANCES OF PIKEPERCH *Sander lucioperca* SLUDGE AEROBIC DIGESTION AND LETTUCE GROWTH PERFORMANCE IN ITS EFFLUENTS
- 16.10 U. Knaus**, H.-D. D. Hübner, H.W. Palm
AQUAPONICS (S.L.) PRODUCTION OF SPEARMINT *Mentha spicata* AND BASIL *Ocimum basilicum* WITH BIOHUMIN AND AFRICAN CATFISH *Clarias gariepinus*
- 16.30 Gilles Stouvenakers**, Sébastien Massart, M. Haïssam Jijakli
AQUAPONIC WATER SUPPRESSIVENESS ON *Pythium aphanidermatum* ROOT ROT IN LETTUCE AND ITS ORIGIN
- 16.50 Sarah Milliken**, Benz Kotzen, Ranka Junge, Morris Villarroel, Tjasa Griessler Bulc
AQU@TEACH: INNOVATIVE EDUCATIONAL TOOLS TO PROMOTE LEARNING AMONG EUROPEAN STUDENTS USING AQUAPONICS
- 17.10 Luigi Petrocchi Jasinski**, G. Galliano, L. Rossi
TOWARDS SUSTAINABLE AWARENESS: IMPLEMENTATION OF AN AQUAPONIC CODE OF PRACTICE

AE2019 INNOVATION FORUM

Wednesday, October 9 10.30 - 17.30 Exhibition 1

Chair: Stefan Meyer

Aquaculture development requires upscaling production systems and developing new solutions for producing more to supply a growing market with healthy products. EAS wants to promote and support start-ups and emerging business models in the aquaculture sector, by matching ideas to those that can push the development of new companies and new products. With all the new knowledge presented at our events, we have a wealth of possibility for innovation and value creation to help develop the sector.

This is the EAS Aquaculture Europe Innovation Forum and its inaugural event will take place during our AE21019 event in Berlin on Wednesday, October 9th. In partnership with Hatch Blue and the German Startups Association, the day will be made up of introductory speakers and then pitches from 12 new companies that wish to seek further investment to develop. Speakers include Olaf Birkner on “raising awareness for your start-up”; “What an investor looks for in a start-up” from Viggo Halseth, Chief Innovation Officer, Nutreco and the “European Innovation Council: a one-stop-shop to high-potential innovators” from Sigi GRUBER, Head of the Healthy Oceans & Seas Unit, in the Directorate General for Research and Innovation at the European Commission. A teaser on ‘lessons learned’ will be provided by Rob van de Ven, Landing Aquaculture, The Netherlands and former EAS Student Group chair.

- 10.30** Short introduction and welcome messages from our partners:
 “Dynamic AgriTech Eco-System - Focus: Marine and Aquaculture”,
 Dominik Ewald, German Startups Association
 Wayne Murphy, COO and co-founder HATCH Aquaculture Accelerator
 Session I TECHNOLOGY Chair Stefan Meyer
- 10.40** “How to get yourself noticed - Raising awareness for your start-up”
 Olaf Birkner - Tech founder and advisor digital marketing and innovations
- 11.00** Introduction of panellists that will judge the pitches of this session
 Dominik Ewald – Monitorfish, Angela Schultz-Zehden – Sustainable Projects
 Lucille Bonnet – High-Tech Gründerfonds and Margriet Drouillon – Gent University
- 11.10** Microbia Environnement – Early warning for Harmful Algal Blooms (HABs)
- 11.20** Networking Break
- 11.30** Umitron – Data services (IoT, remote sensing, AI...)
- 11.40** Tellspec – Fish quality control and fraud
- 11.50** onCyt – Real time monitoring of micro-organisms
- 12.10** Teaser: Rob van de Ven - Landing Aquaculture
- 12.20** Watergenics – Sensors for dissolved oxygen and nutrients
- 12.30** Inalve – Concentrated microalgal production
- 12.40** Wrap-up of session. Lunch break (on your own). One-to-one meetings.
 Session II: PRODUCTION Chair Bjorn Myrseth
- 14.10** “What an investor looks for in a start-up”
 Viggo Halseth, Chief Innovation Officer Nutreco
- 14.30** Session II Introduction of panellists that will judge the pitches of this session
 Viggo Halseth – Nutreco, Robin Shields – Scottish Aquaculture Innovation
 Harald Sveier - Lerøy Seafood Group and Johan Verreth – EAS Past President
- 14.40** SEAentia – Land based production of meagre
- 14.50** SEADUCER – Production equipment for oysters
- 15.10** Arbiom – Feed protein source from wood
- 15.20** Genetirate – selective breeding services (HATCH)

- 15.30** Univiv (HATCH)
- 15.40** Networking Break
- 15.50** Dynaspace – algae detection by state-of-the-art satellite remote sensing (HATCH)
- 16.00** NSS - Nitrogen Sensing Solutions – multiparametric sensor for water analysis (HATCH)
- 16.20** Aquaculture Health Lab – Rapid diagnostics
- 16.30** Tunatech – Blue biofouling bioresources
- 16.40** Panel deliberations
- 16.40** “European Innovation Council: a one-stop-shop to high-potential innovators”
Sieglinde Gruber, European Commission DG R&I
- 16.55** Session chairs wrap up and announce the winners of the AE2019 Innovation Forum
- 17.30** AE2019 Happy Hour in Exhibition Area

EU EATIP DAY – LOW IMPACT – HIGH OUTPUT

Promoting food security and new value chains in aquaculture

Wednesday, October 9 10.30 - 17.30 Exhibition 2

Chair: Sigi Gruber, Alexandra Neyts

Aquaculture in Europe provides safe food of the highest quality and nutritional value, across a wide range of products adapted to consumer preferences and lifestyles. European policies and strategies recognise its potential as a full-fledged sector of the blue bioeconomy and as an essential approach to acquiring global food and nutrition security. Future-proofing our food systems in terms of sustainability, resilience and competitiveness, calls for strengthening circularity and resource efficiency.

According to the report “Food from the Oceans”¹, the biggest potential for increasing seafood production is through mariculture, especially at lower levels in the ocean food chain. In addition, the production of shellfish, algae and other low-trophic organisms contributes to carbon sequestration and eutrophication mitigation. It is therefore important to consider their suitability to produce food and feed, as well as other high value compounds for use in cosmetics, personal care, pigments, etc. Other ways of supporting the circular bio-economy are the use of waste from one aquatic species as feed for another, and the introduction of alternative feed ingredients from insects, unicellular organisms, fungi, wood and other terrestrial plants.

As a joint effort, the Healthy Oceans & Seas Unit of the European Commission, Directorate General Research and Innovation (DG RTD), and the European Aquaculture Technology and Innovation Platform (EATiP) are setting focus on the impact of European research for the benefit of aquaculture development within Europe as well as worldwide. Through three consecutive sessions, they present some major outcomes of technology and innovation efforts that contribute to tackle the bottlenecks and opportunities in aquaculture towards the overall goal of ensuring food and nutrition security. Pitching the latest results from EU funded projects will be followed up by industry-driven panel discussions.

AQUAEXCEL²⁰²⁰ is a key aquaculture research project funded by the EU, which integrates leading European aquaculture research facilities that work towards bringing aquaculture research in Europe to a new level. The latest industry-relevant outputs will be presented and discussed at an interactive brokerage session, creating a forum for engagement and exchange between aquaculture researchers and potential industry beneficiaries of these innovative aquaculture outcomes.

10:30 SESSION 1: Setting the scene – How can European research and innovation stimulate sustainability and competitiveness of the aquaculture sector?

Policy context and stakeholders' engagement driving food security and new value chains in aquaculture. Incl. introductory talks by the European Commission and EATIP.

11:25 SESSION 2 – Low trophic production technologies and new feed resources

New findings, future bottlenecks and opportunities on sustainable production of novel food, feed and added value products from alternative low-trophic resources.

14:10 SESSION 3 – Efficient management systems to optimize sustainability and competitiveness

Sustainable, resilient, climate friendly and competitive practices through eco-intensification, intelligent management and new systems for the production of low-trophic species.

NORTH EUROPEAN FISH SPECIES PARASITE MANAGEMENT STRATEGIES

Wednesday, October 9 10.30 - 17.30 Backstage 2
Chair: Emma Bello Gomez

Disease prevention and management are essential for the sustainability of the European aquaculture industry. The diversity of species and farming practices throughout Europe involves a significant number of threats related to a large variety of pathogens that hamper production and require specific preventive and curative practices and tools ensuring a high level of biosecurity of aquaculture production and related seafood products. Among other disease-related threats, parasites and related infections can cause significant damages to farmed fish species and can result in poor growth performance, impaired welfare, and high mortality rates with significant consequences in terms of production and economic performance.

Over the last four years, the EU-funded project **ParaFishControl** (634429) has been working to develop innovative solutions and tools for the prevention, control and mitigation of the most harmful parasitic species affecting the main European farmed fish species, namely: Atlantic salmon, rainbow trout, turbot, gilthead seabream, European sea bass and common carp.

The “**North European Fish Parasite Management Strategies in Aquaculture Farms**” workshop will focus on the parasites which have been most damaging for fresh water and marine farmed species in North Europe (salmon, carp and trout) - *Lepeophtheirus salmonis*, *Tetracapsuloides bryosalmonae*, *Sphaerospora molnari*, *Ichthyophthirius multifiliis*, *Paramoeba perurans* and *Saprolegnia parasitica* as well as zoonotic helminths. During the workshop, industry representatives will provide an overview of the most prevalent issues related to parasitic diseases in North European aquaculture farms. **ParaFishControl** partners will then present the **new tools and techniques** developed within the project to **diagnose, prevent and treat** these diseases. The workshop will provide attendees with new knowledge to better manage their farms, and greatly reduce population loss in a cost-effective way.

More information about the event and full programme of the ParaFishControl workshop will be available online at: <https://bit.ly/2lwQw3J>

AE2019 INNOVATION FORUM - (1 TO 1 MEETINGS)

Wednesday, October 9 10.30 - 17.30 Backstage 3

Chair: Stefan Meyer

GENERAL CONTRIBUTED NUTRITION

Wednesday, October 9 10.30 - 17.30 Foyer 4

Chair: Andrew Richardson

- 10.30 Barbara Rossi**, Maria Angéles Esteban, José María García-Beltrán, Alberto Cuesta, Andrea Piva, Ester Grilli
ANTIOXIDANT EFFECT OF THYMOL AND SORBIC ACID IN FISH HEPATOCYTES *IN VITRO*
- 10.50 Florence Perera**, Bjørn Grønevik, Mette Sørensen, Ørjan Hagen
THE EFFECT OF TOTAL REPLACEMENT OF FISH OIL WITH RAPESEED OIL ON GROWTH, BODY COMPOSITION AND GUT HEALTH OF JUVENILE LUMPFISH *Cyclopterus lumpus*
- 11.10 Kamil Mert Eryalçin**, Marisol Izquierdo
VITAMIN AND MINERAL COMPOSITIONS OF THE ROTIFER *Brachionus plicatilis* (MÜLLER, 1786) CULTURED WITH DIFFERENT FEEDS
- 11.30 Erik Höglund**
ANTI-INFLAMMATORY FEEDS AND TRYPTOPHAN METABOLIC PATHWAYS TO STRESS RESILIENCE IN FISH
- 11.50 Susana M.F. Ferreira**, Gonçalo Branco, Pedro M. Santos, Andreia Raposo, Ana Pombo
EFFECTS OF VEGETABLE DIETS ON THE GROWTH, GAMETOGENIC AND OFFSPRING DEVELOPMENT OF THE SEA URCHIN *Paracentrotus lividus* (LAMARCK, 1816)
- 12.10 Monica B. Betancor**, Alexa MacEwan, Matthew Sprague, Daniel Montero, Fernando Norambuena, Olga Sayanova, Lihua Han, Johnathan Napier, Marisol Izquierdo, Douglas R. Tocher
FEASIBILITY OF AN OIL DERIVED FROM A GM-OILSEED CROP AS A SUBSTITUTE FOR FISH OIL IN FEEDS FOR EUROPEAN SEA BASS *Dicentrarchus labrax*
- 12.30 Zainal Abdin Muchlisin**, Abdullah A. Muhammadar, Nur Fadli, Kartini Eriani, Irma Dewiyanti, Mahfud Mahfud
APPLICATION OF PROBIOTIC AND PAPAINE ENZYME IN THE DIET OF TROPICAL SHORTFIN EEL *Anguilla bicolor*
- 12.50 LUNCH**
- 14.30 Xiaoting Zheng**, Adam F. Feyaerts, Patrick Van Dijck, Peter Bossier
EVALUATION OF THE ANTI-VIBRIO ACTIVITY OF ESSENTIAL OILS AND THEIR COMPONENTS IN GNOTOBIOTIC ARTEMIA TEST SYSTEM

- 14.50 Sjo Zwart**, Frank Ruyseveldt
EVALUATING THE EFFECT OF DIFFERENT FEED PHOSPHATES ON BLOOD PARAMETERS, CORPSE ANALYSIS, INTESTINAL HISTOLOGY AND GROWTH RATE OF KOI CARP *Cyprinus carpio*
- 15.10 Amal Biswas**, Fumiaki Takakuwa, Shinichi Yamada, Akihisa Matsuda, Hiroki Kihara, Jonas Miller, Josh Silverman, Renee Saville, Allan LeBlanc, Hideki Tanaka
METHANOTROPH *Methylococcus capsulatus* MEAL AS AN ALTERNATIVE PROTEIN SOURCE FOR YELLOWTAIL *Seriola quinqueradiata*

GENOMIC RESEARCH, TOOLS AND APPLICATIONS

Wednesday, October 9 10.30 - 17.30 Room 3

Chairs: Klaus Kohlmann, Ross Houston

- 10.30 Yang Jin**, Rolf Erik Olsen, Thomas Nelson Harvey, Mari-Ann Østensen, Keshuai Li, Nina Santi, Olav Vadstein, Jon Olav Vik, Simen Rød Sandve, Yngvar Olsen
DOMESTICATION-ASSOCIATED LIPID METABOLISM REGULATION IN ATLANTIC SALMON
- 10.50 Manu K. Gundappa**, A.C. Bertolotti, R.M. Layer, M.D. Gallagher, C.M. Hollenbeck, T. Nome, S.R. Sandve, D. Robledo, R.D. Houston, I.A. Johnston, S. Lien, D.J. Macqueen
THE STRUCTURAL VARIATION LANDSCAPE IN ATLANTIC SALMON AND IT'S POTENTIAL CONTRIBUTION TO DISEASE RESISTANCE
- 11.10 Nicholas Robinson**, Luqman Aslam, Diego Robledo, Ross Houston, Hooman Moghadam, Borghild Hillestad, Matthew Kent, Matthew Baranski, Aleksei Krasnov, Solomon Boison
QTL AND EQTL FOR SALMONID ALPHAVIRUS VIRAL LOAD IN ATLANTIC SALMON – IMPLICATIONS FOR PANCREAS DISEASE RESISTANCE AND TOLERANCE
- 11.30 Muhammad Luqman Aslam**, S.A. Boison, C. Jacq, O.J. Hansen, V. Puvanendran, A. Mortensen, P. Sae-Lim
GENETICS OF LICE EATING ABILITY IN LUMPFISH *Cyclopterus lumpus* USING ddRAD SEQUENCING
- 11.50 Jan Pawlowski**, Kristina Cermakova, Tristan Cordier
MONITOR THE ENVIRONMENTAL IMPACTS THROUGH ARTIFICIAL INTELLIGENCE APPLIED TO METAGENOMICS
- 12.10 Emilie Cardona**, Jérôme Montfort, Hugues Parinello, Laurent Journot, Julien Bobe, Sandrine Skiba-Cassy
CIRCULATING MICRORNA IN PLASMA AND OVARIAN FLUID AS POTENTIAL NON INVASIVE BIOMARKERS OF NUTRITION AND REPRODUCTION OF FEMALE RAINBOW TROUT *Oncorhynchus mykiss*
- 12.30 Fabio Sarais**, Henrike Rebl, Marieke Verleih, Bernd Köllner, Alexander Rebl, Tom Goldammer
MOLECULAR CHARACTERIZATION OF THE NKIRAS PROTEIN FAMILY IN RAINBOW TROUT *Oncorhynchus mykiss*

12.50 LUNCH

- 14.30 Mikhail Ozerov**, Anti Vasemägi, Riho Gross
DECIPHERING THE GENOME OF THE RIVER MONSTER – THE EUROPEAN CATFISH
Silurus glanis
- 14.50 Daniel Zarski**, Aurelie Le Cam, Joanna Nynca, Christophe Klopp, Slawomir Ciesielski, Jerome Montfort, Pascal Fontaine, Andrzej Ciereszko, Julien Bobe
TRANSCRIPTOMIC PROFILING OF EGGS OF PIKEPERCH *Sander lucioperca* REVEALS
NOVEL EGG-QUALITY-ASSOCIATED TRANSCRIPTS
- 15.10 Carolina Peñaloza**, Tereza Manousaki, Rafaella Franch, Alexandros Tsakogiannis, Anna Sonesson, Luca Bargelloni, Costas Tsigenopoulos, Ross Houston
DEVELOPMENT OF A COMBINED SPECIES SNP ARRAY FOR THE EUROPEAN SEA BASS
AND THE GILTHEAD SEA BREAM
- 15.30 Anna K. Sonesson**, Siri Storteig Horn, Theo Meuwissen, Aleksei Krasnov, Borghild Hillestad, Hooman Moghadam, Bente Ruyter
GENOMICS OF OMEGA-3 FATTY ACID CONTENTS IN ATLANTIC SALMON
- 15.50 Luca Bargelloni**, Marianna Pauletto, Serena Ferrareso, Massimiliano Babbucci, Giuseppe Radaelli, Lisa Maccatrozzo, Daniela Bertotto
MUSCLE TRANSCRIPTOME RESPONSE TO FASTING-REFEDING IN FAST-GROWING
COMPARED TO AGE- OR SIZE-MATCHED SLOW GROWING INDIVIDUALS IN THE
GILDHEAD SEA BREAM
- 16.10 Tom L. Jenkins**, Charlie D. Ellis, Carly L. Daniels, Eduarda M. Santos, Jamie R. Stevens
DETERMINING THE HERITABILITY OF GROWTH TRAITS IN CULTURED EUROPEAN
LOBSTERS USING GENOMICS
- 16.30 Inés González-Castellano**, Chiara Manfrin, Alberto Pallavicini, Ana M. González-Tizón, Andrés Martínez-Lage
NOVEL INSIGHTS INTO SEX-RELATED GENES IN THE COMMON LITTORAL SHRIMP
Palaemon serratus BY GONADAL TRANSCRIPTOMIC ANALYSIS
- 16.50 Jeremiah Minich**, Eric Allen, Rob Knight
CONSIDERATIONS FOR MICROBIOME RESEARCH IN AQUACULTURE: OVERCOMING
CHALLENGES WITH LOW BIOMASS ENVIRONMENTS, REDUCING COSTS,
ADDRESSING TECHNICAL NOISE, AND META-ANALYSES
- 17.10 Julien Nguinkal**, Lidia de los Ríos-Pérez, Nadine Schäfer, Frieder Hadlich, Marcus Stüecken, Olaf Wolkenhauer, Ronald M. Brunner, Alexander Rebl, Marieke Verleih, Dörte Wittenburg, Tom Goldammer
THE DRAFT GENOME OF PIKEPERCH *Sander lucioperca*

VALUE ADDITION AND MARKETING

Wednesday, October 9 14.30 - 17.30 Room 5

Chairs: Marija Banovic, Johannes Simons

WEDNESDAY

- 14.30 Johan Johansen**, Lars Svenningsson, Hallstein Baarset
ECOINTENSIFICATION OF AQUACULTURE: CAPTURE AND VALORISATION OF SLUDGE FROM AQUACULTURE WASTEWATER
- 14.50 Andreas Müller-Belecke**, Nicolas Borchert, Rafael Valbuena, Adam Erdős
FISHMEAL FROM ENSILAGED FRESHWATER FISH PROCESSING BY-PRODUCTS IN A RAINBOW TROUT DIET: GROWTH PERFORMANCE, PRODUCT QUALITY AND ENVIRONMENTAL IMPACT
- 15.10 Sara Ramírez-Bolaños**, S. Díaz, N. Díaz-Padilla, A. Ventura-Castellano, R. Quirós-Pozo, L. Robaina
NOVEL BANANA BY-PRODUCTS IN SEABASS *Dicentrarchus labrax* DIETS
- 15.30 Jose Luis Fernández Sánchez**, Jose Manuel Fernández Polanco, Ignacio Llorente García, Elisa Baraibar Diez, Maria Dolores Odriozola Zamanillo, Manuel Luna García, Ladislao Luna Sotorrio
THE EFFECT OF PRICE AND PRODUCTION CHANGES ON FIRMS' PROFITABILITY AND RISK: A SIMULATION WITH EUROPEAN PRODUCERS OF CULTURED SEA BASS AND SEA BREAM
- 15.50 Guilherme Wolff Bueno**, Maicon R. Brande, Naor Silveira Fialho, Elisa M. Godoy, Pablo Gallardo Ojeda, Rodrigo Roubach
FINANCIAL RISK EVALUATION OF COMMERCIAL PRODUCTION OF NILE TILAPIA *Oreochromis niloticus* IN NET-CAGES, SÃO PAULO, BRAZIL
- 16.10 Marija Banovic**, Machiel Reinders, Anna Claret, Luis Guerrero, Athanasios Krystallis
WHAT SEPARATES WINNERS FROM LOSERS? EVIDENCE FROM A CROSS-COUNTRY INVESTIGATION ON CONSUMER ACCEPTANCE OF NEW AQUACULTURE PRODUCTS
- 16.30 Johannes Simons**, Carl Vierboom, Michael Ley, Stefan Johnigk
FISH QUALITY: A PSYCHOLOGICAL PERSPECTIVE
- 16.50 Sofia C. Franco**, Sharron Kuznesof, Bruna Simões, Beth Clark, Peter Jackson
TOWARDS IMPROVED COMMUNICATION IN AQUACULTURE: EXPLORING CONSUMERS' PERCEPTIONS AND ATTITUDES
- 17.10 Johannes Simons**, Carl Vierboom, Michael Ley, Stefan Johnigk
CHALLENGES OF CONSUMER ORIENTED COMMUNICATION ABOUT SCIENTIFICALLY BASED SUSTAINABILITY STANDARDS FOR AQUACULTURE

FUNCTIONAL AQUAFEEDS

Wednesday, October 9 14.30 - 17.30 Europe Hall

Chair: Pedro Gomez Requeni

Sponsored by Biomar



WEDNESDAY

- 14.30 Jie Wang**, Peng Lei, Amr A.A. Gamil, Leidy Lagos, Yang Yue, Kristin Schirmer, Liv Torunn Mydland, Margareth Øverland, Åshild Krogdahl, Trond M. Kortner
RAINBOW TROUT *Oncorhynchus mykiss* INTESTINAL EPITHELIAL CELLS AS A MODEL FOR STUDING GUT IMMUNE FUNCTION AND EFFECTS OF FEED ADDITIVES
- 14.50 Carmen Tatiana Kalinowski**, L.E. Robaina, L. Larroquet, V. Veron, S. Kaushik, S. Fontagné-Dicharry
INFLUENCE OF DIETARY ASTAXANTHIN ON THE OXIDATIVE STRESS RESPONSE CAUSED BY EPISODIC HYPEROXIA IN RAINBOW TROUT
- 15.10 Paul J. Midtlyng**
ANTI-INFLAMMATORY EFFECTS OF BETA-1,3/1,6 GLUCAN SUPPLEMENTED FEED IN ATLANTIC SALMON *Salmo salar*
- 15.30 Nicola Tallarico**, Christophe Bodenreider, Geoff Horst
POSITIVE EFFECTS OF SUPPLEMENTING ALGAL 1,3-BETA GLUCAN ON THE SURVIVAL OF ATLANTIC SALMON *Salmo salar* IN CHALLENGE CONDITIONS
- 15.50 Yanxian Li**, Leonardo Bruni, Alexander Jaramillo-Torres, Trond Kortner, Elvis Chikwati, Ikram Belghit, Erik-Jan Lock, Åshild Krogdahl
GUT HEALTH AND MICROBIOTA IN POST-SMOLT ATLANTIC SALMON *Salmo salar* FED LARVAE MEAL FROM BLACK SOLDIER FLY *Hermetia illucens*
- 16.10 Nafsika Karakatsouli**, Kostas Domalis, Socratis Panopoulos, Antonio Coli, Constantina Anastasiadou, Maria Rati, Spyros Bantounas, Alkisti Batzina
INVESTIGATION OF EARLY INTRODUCTION OF DRY FEED ON GILTHEAD SEABREAM *Sparus aurata* LARVAL DEVELOPMENT AND GROWTH PERFORMANCE AFTER METAMORPHOSIS
- 16.30 Delano Dias Schleder**, Priscila Costa Rezende, Felipe Nascimento Vieira
COMBINATIONS OF BROWN SEAWEEDS AS FEED ADDITIVES IMPROVED THERMAL SHOCK RESISTANCE OF PACIFIC WHITE SHRIMP POST-LARVAE REARED IN BIOFLOC SYSTEM
- 16.50 Ricardo Pereira**, Luísa Valente, Sónia Batista
ANTIOXIDANT AND IMMUNE-MODULATORY POTENTIAL OF MARINE ALGAE IN DIETS FOR EUROPEAN SEABASS
- 17.10 Leong-Seng Lim**, Rossita Shapawi, Gunzo Kawamura
AMINO ACIDS AS FEEDING STIMULANT IN THE DEVELOPMENT OF SOYBEAN-BASED DIET FOR JUVENILE GROUPEL *Epinephelus fuscoguttatus*

GENERAL BIOLOGY OF FARMED SPECIES

Wednesday, October 9 14.30 - 17.30 Lounge 1-3

Chair: Ivo Monteiro

WEDNESDAY

- 14.30 Orestis Stavrakidis-Zachou**, Konstada Lika, Jorge Alarcon, Abdulaziz M. Al-Suwailem, Nikos Papandroulakis
BIOLOGICAL PERFORMANCE OF MEAGRE *Argyrosomus regius* UNDER HIGH TEMPERATURE
- 14.50 Dieter Steinhagen**, M. Adamek, M. Dietrich, F. Teitge, M. Ganter, I. Baumann, V. Jung-Schroers, V. Piackova, G. Gela, M. Kocour, A. Cierieszko, D. Steinhagen
THE MULTIFUNCTIONAL GILL – THE ACHILLES’ HEEL OF FISH HEALTH?
- 15.10 Smaragda Tsairidou**, A. Hamilton, D. Robledo, J. Bron, R.D. Houston
OPTIMISING GENOMIC SELECTION WITH LOW DENSITY MARKERS IN FARMED ATLANTIC SALMON
- 15.30 Benan Gulzari**, Kasper Janssen, Hans Komen
IDENTIFICATION OF FACTORS EXPLAINING THE GROW-OUT PERFORMANCE OF EUROPEAN SEABASS *Dicentrarchus labrax* AND GILTHEAD SEABREAM *Sparus aurata* IN THE MEDITERRANEAN
- 15.50 Sergio Vela-Avitúa**, Ingunn Thorland, Vasileios Bakopoulos, Kantham Papanna, Arkadios Dimitroglou, Leonidas Papaharisis, Bruno Guinand
ADVANCED SELECTIVE BREEDING FOR DISEASE RESISTANCE IN EUROPEAN SEA BASS *Dicentrarchus labrax*
- 16.10 Laureana Rebordinos**, Aglaya Garcia-Angulo, Emilio García, Silvia Portela-Bens, María Esther Rodríguez, Belen Molina, Manuel Alejandro Merlo, Marco Anaya, Alberto Arias, Ismael Cross
CONSTRUCTION ON AN INTEGRATED GENETIC MAP OF BENEFIT TO THE *Solea senegalensis* AQUACULTURE
- 16.30 Carlos Andrade**, Natacha Nogueira, Mariana Martins
MONITORING IMPACTS OF MACROPLASTICS IN MADEIRA ISLAND’S OFFSHORE FISH FARM OF *Sparus aurata*
- 16.50 Maria Mastoraki**, Lydia Katsika, Efthimia Antonopoulou, Laura Gasco, Stavros Chatzifotis
THE EFFECT OF FISHMEAL SUBSTITUTION WITH THREE DIFFERENT INSECT MEALS ON GROWTH PERFORMANCE, NUTRIENT UTILIZATION AND DIGESTIBILITY OF GILTHEAD SEA BREAM *Sparus aurata*

NUTRITION: ADDITIVES AND INGREDIENTS - CONTINUED

Wednesday, October 9 14.30 - 17.30 Backstage 1

Chair: Katerina Kosoulaki, Kiron Viswanath

- BD # 356** **Luca Grosso**, Alessandra Fianchini, Stefano Cataudella, Michele Scardi, Arnold Rakaj
EFFECTS OF DIFFERENT DIETS ON THREE SIZE CLASSES OF SEA URCHIN *Paracentrotus lividus*
- 14.30** **Marialena Kokkali**, Francisco J. Barba, Francisco J. Marti-Quija, Dorinde Kleinegris, Katerina Kousoulaki
RELEASE OF PHENOLICS AND OTHER ANTIOXIDANTS FROM MICROALGAE *Phaeodactylum tricornutum* AND *Tetraselmis chuii* FOLLOWING BEAD MILLING
- 14.50** **Alessandra Roncarati**, Marina C.T. Meligrana, G. Enrico Magi, Francesca Mariotti
RAINBOW TROUT *Oncorhynchus mykiss* GROWING TRIAL USING DIETS WITH DIFFERENT DOSAGES OF THE SAME ADDITIVE
- 15.10** **Maria Angéles Esteban**, Barbara Rossi, José María García-Beltrán, Alberto Cuesta, Andrea Piva, Ester Grilli
DOSE-EFFECT RESPONSE OF A BLEND OF ORGANIC ACID AND NATURE-IDENTICAL COMPOUNDS ON GILTHEAD SEABREAM *Sparus aurata* L.
- 15.30** **Roel Maas**, Marc Verdegem, Yueming Dersjiant-Li, Johan Schrama
IMPACT OF NSP LEVEL AND ENZYMES (PHYTASE AND XYLANSE) ON NUTRIENT UTILIZATION, GROWTH PERFORMANCE IN NILE TILAPIA *Oreochromis niloticus*
- 15.50** **Frederik Kaiser**, Carsten Schulz
EFFECTS OF RAPESEED PROTEIN PRODUCTS SUPPLEMENTED WITH GLUCOSINOLATES AND PHYTIC ACID ON THE GROWTH PERFORMANCE OF RAINBOW TROUTS *Oncorhynchus mykiss*
- 16.10** **Heba Abdel-Ghany**, Mohamed Salem, Samia Abu-Elkhair
USE OF AN EXOGENOUS ENZYMES AND PROBIOTICS COCKTAIL TO ENHANCE THE GROWTH PERFORMANCE OF RED TILAPIA *Oreochromis niloticus* × *O. mossambicus* AND ELIMINATING THE BACTERIAL COUNT IN ITS EFFLUENTS
- 16.30** **Trine Ytrestøyl**, Bente Ruyter, Bjarne Hatlen, Elena Shumilina, Allessandra Ciampa, Marta Bou, Aleksei Krasnov, Tone-Kari Østby, Alexander Dikiy
HOW DIET COMPOSITION AND ENVIRONMENTAL FACTORS AFFECT THE UPTAKE AND METABOLISM OF ASTAXANTHIN IN ATLANTIC SALMON *Salmo salar*

SUSTAINABLE EUROPEAN AQUACULTURE 4.0: NUTRITION AND BREEDING INNOVATIONS

Wednesday, October 9 14.30 - 17.50 Room 30341, Wing 3, Estrel Hotel

Chair: Antti Kuse

WEDNESDAY

Session: Sustainable European aquaculture 4.0: nutrition and breeding innovations

In recent years, advancements in enabling technologies have led to completely novel innovations that are now being implemented within the aquaculture industry. This session presents the latest developments in the interacting fields of digital information technology, genomics and circular economy applied in fish feeding, nutrition and selective breeding. They together produce more sustainable aquaculture practices and more robust, healthy, nutritious and resource-efficient farmed fish. The results originate from three Horizon 2020 EU-projects, AqualMPACT, FutureEUAqua and iFishIENCi, funded under the topic 'Sustainable European Aquaculture 4.0: Nutrition and Breeding Innovations'. In these complementary projects, researchers and companies together develop more sustainable aquaculture corresponding to the UN's Sustainable Development Goals.

14.30 Antti Kause

AqualMPACT – GENOMIC AND NUTRITIONAL INNOVATIONS FOR GENETICALLY SUPERIOR FARMED FISH

14.50 Lars Ebbesson, Dominique Durand, Tamás Bardócz

iFishIENCi: INTELLIGENT FISH FEEDING THROUGH INTEGRATION OF ENABLING TECHNOLOGIES AND CIRCULAR PRINCIPLES

15.10 Åsa Maria Espmark

FutureEUAqua – FUTURE GROWTH IN SUSTAINABLE, RESILIENT AND CLIMATE FRIENDLY ORGANIC AND CONVENTIONAL EUROPEAN AQUACULTURE

15.30 Giuseppe Lembo, Pierluigi Carbonara, Sebastien Alfonso, Walter Zupa, Maria Teresa Spedicato

THE ROLE OF INTERNET OF THINGS FOR HEALTHY FISH AND ENVIRONMENT IN THE EUROPEAN AQUACULTURE

15.50 Franck Le Gall, Ahmed Abid, Philippe Cousin, Elisa Ravagan

MODELLING DATA IN THE CONTEXT OF AQUACULTURE

16.10 Steven Prescott, Tamas Bardocz

iFishIENCi: WILL INCREASED EFFICIENCY THROUGH THE USE OF BREAKTHROUGH INNOVATIONS AND PRINCIPLES OF CIRCULAR ECONOMY TRANSLATE INTO IMPROVED SUSTAINABILITY FOR EUROPEAN AQUACULTURE?

16.30 Elena Mente, K. Kousoulaki, N. Vlahos, A. Vasilaki, E. Antonopoulou, A. Jokumsen, P. Lembo, I. Nengas

FEED AND NUTRITION IN ORGANIC AQUACULTURE

16.50 Daniel Montero, S. Torrecillas, D.R. Tocher, M. Vandeputte, R. Fontanillas, G. Rosenlund, P. Haffray, B. Ruyter, A. Sonesson, J. Bastiaansen, A. Kause

DEVELOPMENT OF FISH FEEDS AND FEEDING STRATEGIES FOR GENETICALLY SUPERIOR FISH FROM BREEDING PROGRAMMES

17.10 John Bastiaansen

THE IMPACT OF GENOMIC SELECTION IN COMMERCIAL BREEDING PROGRAMMES FOR FOUR IMPORTANT SPECIES IN EUROPEAN AQUACULTURE

17.30 Anne Kettunen, Marie Lillehammer

POWER CALCULATIONS FOR OPTIMISATION OF THE EXPERIMENTAL DESIGN TO DETECT G X E: SALMON EXPERIMENTS IN FutureEUAqua

WOMEN IN AQUACULTURE

Wednesday, October 9 16.30 - 17.30 Festival

Chair: Alistair Lane

Jointly organised by EAS and The Fish Site, the Women in Aquaculture session will offer firsthand insights into how women can overcome perceived gender-related obstacles and build thriving careers right across the aquaculture sector. Panellists will discuss key issues related to the benefits of diversity in the workforce and ways to ensure that aquaculture organisations pursue recruitment policies that allow talented people, regardless of gender, to succeed.

SESSION HOSTS

Synnøve Hellund, NOFIMA AND EATIP
Rob Fletcher, The Fish Site

PANEL MEMBERS

Lara Barazi, Kephalonian Fisheries
Ole Christiansen, BIOMAR
Ben Hadfield, MOWI Scotland
Matthijs Metselaar, Benchmark Animal Health
Birgit Schmidt-Puckhaber, German Agriculture Society
Selina Stead, University of Stirling

THURSDAY, October 10

ENVIRONMENTAL AND ECOSYSTEM MANAGEMENT

Thursday, October 10 09.00 - 11.20 Exhibition 2

Chair: Oyvind Berg

THURSDAY

- 09.00 Pierre Gernez**, Laura Zoffoli, Thomas Lacour, Virginie Raimbault, Véronique Séchet, Victor Martinez Vicente, Tristan Harmel
HIGH RESOLUTION SATELLITE REMOTE SENSING OF RED TIDES IN SHELLFISH FARMING COASTAL WATERS
- 09.20 Roberto Pastres**, Suzanne B. Bricker, Bela H. Buck, Luis Conceição, Joao Gomes Ferreira, Jon Grant, Johan Johansen, David C. Little, Carmen Sotelo, Chang Bo Zhu
TOWARDS THE ECOLOGICAL INTENSIFICATION OF EUROPEAN AQUACULTURE: THE GAIN PROJECT
- 09.40 Maren Lyngsgaard**, Per Dolmer, Daniel Taylor, Bent Vismann
BLUE BIOMASS – A WAY FORWARD FOR MITIGATION MUSSELS
- 10.00 Ellen Sofie Grefsrud**, Terje Svåsand, Lasse Berg Andersen
RISK ASSESSMENT OF NORWEGIAN SALMON FARMING – A NEW APPROACH
- 10.20 Marcos Carvajalino Fernández**, N.B. Keeley, I. Fer, B.A. Law, R.J. Bannister
IMPACT OF BOTTOM SUBSTRATE TYPE ON THE RESUSPENSION OF ATLANTIC SALMON *Salmo salar* FAECAL MATERIAL
- 10.40 Thorsten Stoeck**, Thomas A. Wilding, Tristan Cordier, Jan Pawlowski, Verena Dully, Larissa Frühe, Marc Coulson
ESTABLISHING BENTHIC ECOLOGICAL STATUS AROUND SALMON AQUACULTURE CAGES USING DNA-BASED ENVIRONMENTAL MONITORING
- 11.00 Øivind Bergh**, Alexander Christian Beck, Guldborg Søvik, Erik Olsen, Trude H. Thangstad, Genoveva Gonzalez-Mirelis, Fabio Grati, Luca Bolognini
SPATIAL CONFLICTS OF COASTAL FISHERIES WITH LARGE SCALE SALMONID AQUACULTURE IN A NORWEGIAN FJORD ENVIRONMENT ANALYZED BY GIS AND STAKEHOLDER SURVEYS

SUSTAINABLE SYSTEMS FOR LARGE SCALE PRODUCTION - CLOSED, OFFSHORE OR BOTH

Thursday, October 10 09.00 - 11.20 Room 5

Chairs: Asa Espmark, Hans Bjelland

- 09.00 David Kristiansen**, Biao Su, Stefan Vilsen, Per C. Endresen, Carina Norvik, Zsolt Volent
DESIGN CONSIDERATIONS AND RESEARCH CHALLENGES FOR CLOSED FISH CAGES IN
CURRENTS AND WAVES
- 09.20 Sharada Navada**, Frédéric Gaumet, Olav Vadstein, Claudia Spanu, Øyvind Mikkelsen,
Jelena Kolarevic
IMPROVING SALINITY ADAPTATION IN NITRIFYING BIOREACTORS BY SEAWATER
PRIMING
- 09.40 Enrique Pino Martinez**, Pablo Balseiro Vigo, Markus Braanaas, Valentina Tronci,
Cindy Pedrosa, Naouel Gharbi, Sigurd Handeland, Tom Nilsen
INFLUENCE OF WATER TEMPERATURE AND FEEDING REGIME ON THE INCIDENCE
OF EARLY SEXUAL MATURATION IN ATLANTIC SALMON *Salmo salar* L. POSTSMOLTS
DURING THE FRESHWATER STAGE
- 10.00 Khurram Shahzad**, Harald Takle, Karl F. Ottem, Magnus Stendal, Kevin T. Stiller,
Yuriy Marchenko, Jelena Kolarevic
CFD MODELING OF SEMI-CLOSED CONTAINMENT FLOATING SYSTEM WITH FLEXIBLE
WALLS EFFECT OF INLET ORIENTATION ANGLE ON THE FLOW FIELD HYDRODYNAMICS
- 10.20 Christopher Good**, Travis May, Curtis Crouse, John Davidson, Natalie Redman,
Megan Murray, Anna DiCocco, Brian Vinci, Steven Summerfelt, Lars Ebbesson,
Sigurd Handeland, Tom Ole Nilsen, Sigurd Stefansson, Bendik Fyhn Terjesen,
Frode Mathisen, Åsa Maria Espmark
DETERMINING THE IMPACT OF PHOTOPERIOD, FEEDING REGIME, AND PLOIDY ON
ATLANTIC SALMON *Salmo salar* POST-SMOLT HEALTH, GROWTH PERFORMANCE, AND
MATURATION IN FRESHWATER RECIRCULATION AQUACULTURE SYSTEMS
- 10.40 John Davidson**, Steven Summerfelt, Brian Vinci, Kevin Schrader, Christopher Good
EVALUATING THE FEASIBILITY OF INCORPORATING MEMBRANE BIOLOGICAL REACTORS
WITHIN RAS: EFFECTS ON WATER USE, WATER QUALITY, AND RAINBOW TROUT
Oncorhynchus mykiss PERFORMANCE
- 11.00 Uwe Waller**, Klaus Kimmerle, Sabine Boehmer, Uwe Köhler
SUSTAINABLE AQUACULTURE OF ATLANTIC SALMON *Salmo salar* ON BOARD A LARGE
SAIL SHIP

THURSDAY

BALTIC AQUACULTURE

Thursday, October 10 09.00 - 11.20 Lounge 1-3

Chair: Mathis von Ahnen

- 09.00 Monika Normant-Saremba**, Hanna Ladkowska, Halina Kendzierska, Barbara Dmochowska, Katarzyna Smolarz
FROM LARVAE TO PLATE – AN EXPERIMENTAL LAND-BASED RAS CULTURE OF *Litopenaeus vannamei* IN POLAND
- 09.20 Xiaoyu Huang**, Carlos Letelier-Gordo
NITROGEN REMOVAL FROM A SALT-WATER RECIRCULATING AQUACULTURE SYSTEM (RAS) USING A STEP FED BATCH REACTOR (SFBR) OPERATED UNDER EXTERNAL AND INTERNAL CARBON SOURCES
- 09.40 Jouni Vielma**, Gunno Renman, Agnieszka Renman, Jani Pulkkinen
PHOSPHORUS REMOVAL FROM RECIRCULATING AQUACULTURE SYSTEMS (RAS) EFFLUENT BY REACTIVE COLUMN FILTERS
- 10.00 Sanni Aalto**, Jani T. Pulkkinen, Suvi Suurnäkki, Jouni Vielma, Marja Tirola
AUTO- AND HETEROTROPHIC NITROGEN REMOVAL IN WOODCHIP REACTORS TREATING RECIRCULATING AQUACULTURE SYSTEM EFFLUENTS
- 10.20 Suvi Suurnäkki**, Jani Pulkkinen, Marja Tirola, Sanni Aalto
GEOSMIN PRODUCERS AND MICROBIAL COMMUNITY COMPOSITION IN COMMERCIAL RECIRCULATING AQUACULTURE FARMS
- 10.40 Anniina Runtuvuori**, Heidi Kunttu, Gabriel Almeida, Elina Laanto, Kati Mäkelä, Mathias Middelboe, Lotta-Riina Sundberg
ISOLATION AND CHARACTERIZATION OF NEW *Flavobacterium columnare* AND ITS BACTERIOPHAGES FROM FISH FARMS
- 11.00 Miriam von Thenen**, M. Maar, H.S. Hansen, K.S. Schiele
A GIS SUITABILITY ANALYSIS FOR SELECTING MUSSEL FARM SITES IN THE SOUTH-WESTERN BALTIC SEA

GOVERNANCE, POLICY, REGULATIONS AND STRATEGIC PLANNING

Thursday, October 10 09.00 - 11.20 Room 4

Chair: John Bostock

- 09.00 Qingyin Wang**
~~CANCELLED~~ SOME CONSIDERATIONS ON THE SUSTAINABLE DEVELOPMENT OF AQUACULTURE – CHALLENGES, CONSTRAINTS AND PROSPECTS
- 09.20 Keith Jeffery**, Stephen Mangi, Heather Conejo-Watt, Angela Muench, Kieran Hyder
INTEGRATION OF FISHERIES AND AQUACULTURE INTO A MORE HOLISTIC SEAFOOD PRODUCTION SYSTEM
- 09.40 Øivind Bergh**
CONSTRAINTS AGAINST GLOBAL DEVELOPMENT OF AQUACULTURE: COMPETITION FOR SPACE, RESOURCES AND SOCIETAL COMMITMENT

- 10.00 Jenny Weitzman**, Ramon Filgueira, Jon Grant
TOWARDS AN ECOSYSTEM APPROACH TO AQUACULTURE: DEVELOPING A HOLISTIC FRAMEWORK FOR CARRYING CAPACITY OF SALMON AQUACULTURE IN CANADA
- 10.20 Trevor Telfer**, Hanne Kaas, Anne Lise Middelboe, Lynne Falconer, Pauline O'Donohoe
AN 'AQUACULTURE SUSTAINABILITY TOOLBOX' FOR FLEXIBLE LICENSING AND REGULATION OF AQUACULTURE IN EUROPE
- 10.40 Gudrun Olafsdottir**, David Cook, Shraddha Mehta, Ingunn Yr Gudbrandsdottir, Maitri Thakur, Sigurdur G. Bogason
GOVERNANCE AND PERCEIVED POWER IN THE SALMON VALUE CHAIN
- 11.00 Tim Knöpfel**, Bernhard Brümmer, Stephan Wessels
EFFICIENCY OF RAINBOW TROUT PRODUCTION IN NORTH-WEST GERMANY

ESCAPES / INTERACTION OF FARMED AND WILD FISH

Thursday, October 10 09.00 - 11.20 Exhibition 1

Chair: Kjetil Hindar

- 09.00 Sten Karlsson**, Tonje Aronsen, Geir Bolstad, Ola H. Diserud, Ingerid J. Hagen, Kjetil Hindar
ESTIMATING GENETIC INTROGRESSION OF FARMED SALMON – P(WILD); METHODOLOGY, ACHIEVEMENTS AND PROSPECTS
- 09.20 Ola H. Diserud**, Kjetil Hindar, Sten Karlsson, Kevin A. Glover, Øystein Skaala
ESCAPED FARM SALMON AFFECT THE GENETICS OF WILD SALMON *Salmo salar* POPULATIONS ALL ALONG THE NORWEGIAN COAST
- 09.40 Tony Farrell**, Yangfan Zhang, Mark Polinski, Phillip Morrison, Colin Brauner, Kyle Garver
THE IMPACT OF A PISCINE ORTHOREOVIRUS (PRV) INFECTION ON THE RESPIRATORY PERFORMANCE AND CAPACITY OF ATLANTIC SALMON AND SOCKEYE SALMON IN BRITISH COLUMBIA, CANADA
- 10.00 Monica F. Solberg**, Grethe Robertsen, Line E. Sundt-Hansen, Kjetil Hindar, Kevin A. Glover
DOMESTICATION LEADS TO INCREASED PREDATION SUSCEPTIBILITY
- 10.20 Marie Lillehammer**
FITNESS EFFECTS OF INTROGRESSION OF ESCAPED FARMED SALMON INTO WILD POPULATIONS
- 10.40 Kevin A. Glover**, Monica Solberg
CRYPTIC INTROGRESSION: WILL PLASTICITY AND NATURAL SELECTION MASK THE EFFECTS OF GENE-FLOW FROM DOMESTICATED ESCAPEES ON NATURAL POPULATIONS?
- 11.00 Øystein Skaala**, Francois Besnier, Reidar Børðstrøm, Bjorn Barlaup, Anne Sørvik, Eirik Normann, Britt Østebø, Michael Hansen, Kevin Glover
A LONG-TERM STUDY OF DOMESTICATED AND WILD ATLANTIC SALMON IN THE RIVER GUDDALSELVA

EUROSHRIMP INDUSTRY FORUM

Thursday, October 10 09.00 - 11.20 Exhibition 2

Chairs: Gregor Jaehne, Stefan Meyer



INFORMAL MEETING FOR ALL SHRIMP ENTHUSIASTS

Meet and greet. We offer the opportunity to meet each other without any program constraints and discuss the topics that interest you the most.

WORKSHOP OPENING

Dr. Matthew Slater, Head of Aquaculture Research Group at the Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research (AWI)

STAKEHOLDER SURVEY “RECIRCULATION AQUACULTURE SYSTEMS – POSITIONS OF THE ORGANIC FOOD SECTOR

Dr. Stefan Bergleitner, Naturland e.V.

DIVERSIFICATION OF GLOBAL SHRIMP FARMING THROUGH TRANSPARENCY – THE NEW ASC METRICS METHODOLOGY

Kathrin Steinberg, Aquaculture Stewardship Council (ASC)

THE DEVELOPMENT OF INEXPENSIVE SALT MIXTURES FOR INLAND INTENSIVE SHRIMP

Litopenaeus vannamei FARMING

Dr. Andrew Ray, Kentucky State University, College of Agriculture, Communities and the Environment, School of Aquaculture and Aquatic Sciences

FIGHTING AND AVOIDING VIBRIO IN INTENSIVE CULTURE OF *Litopenaeus vannamei*. OVERVIEW OF RESEARCH DONE AT CREVETEC FARM

Eric De Muylder, CreveTec

PRODUCTION OF POSTLARVAE *Litopenaeus vannamei* IN EUROPE

Nicola Scalise, EcoShrimp

EXPERIENCES FROM A NEW SHRIMP RESEARCH FACILITY IN LITHUANIA

Nerijus Nika, Kleipeda Science and Technology Park

NATIONAL PILOT PLATFORMS CONECTING THE SHRIMP SECTOR IN VIETNAM, THAILAND AND BANGLASDESH

David Basset, European-Asian Technology and Innovation Platform (EURASTIP)

APPLICATION OF THAILAND TO GET POSITIVE LISTED AS A COUNTRY TO EXPORT LIVE SHRIMP INTO THE EU

Dr. Patrick Sorgeloos, Ghent University, Department of Animal Production

SUPPORT LETTER AND WORKSHOP CLOSING

Dr. Matthew Slater, Head of Aquaculture Research Group at the Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research (AWI)

THURSDAY

NUTRITION: ADDITIVES AND INGREDIENTS - CONTINUED

Thursday, October 10 09.00 - 16.50 Europe Hall

Chair: Katerina Kosoulaki, Kiron Viswanath

- 09.00 Antigoni Vasilaki**, Katerina Kousoulaki, Tor Andreas Samuelsen, Giorgos Pyrenis, Dimitra Kogiannou, Kriton Grigorakis, Eleni Fountoulaki, Elena Mente, Ioannis Nengas
EFFECTS OF NOVEL INGREDIENTS ON GROWTH PERFORMANCE IN EUROPEAN SEA BASS *Dicentrarchus labrax*
- 09.20 Sandrine Skiba**, Christine Burel, Thierry Kerneis, Laurent Labbé, Frédéric Terrier, Geneviève Corraze, Nadège Richard, Yann Marchand, Mathilde Dupont-Nivet
SUPPLEMENTING AQUAFEDS WITH NEW ALTERNATIVE INGREDIENTS: A PROMISING SOLUTION TO IMPROVE PLANT-BASED DIET EFFICIENCY IN RAINBOW TROUT
- 09.40 Pabodha Weththasinghe**, Leidy Lagos, Jon Øvrum Hansen, Liv Torunn Mydland, Margareth Øverland
THE EFFECT OF DIETARY BLACK SOLDIER FLY LARVAE *Hermetia illucens* MEAL AND PASTE ON GROWTH PERFORMANCES AND IMMUNE PARAMETERS IN ATLANTIC SALMON *Salmo salar*
- 10.00 Mette Sørensen**, Katerina Kousoulaki, Dorinde Kleinegris, Chris Andre Johnsen, Anjana M. Paliawadana, Marialena Kokkali, Viswanath Kiron
WHOLE OR BROKEN CELLS OF *Phaeodactylum tricornutum* AND *Tetraselmis chuii* FED TO ATLANTIC SALMON *Salmo salar*
- 10.20 Ricardo Pereira**, Luísa Valente, Mónica Costa, Luís Baião, Sónia Batista, Sergio Fernández-Boo, Benjamín Costas, Luís Cunha, Rui Lima
EXPLORING THE BENEFITS OF NATURAL ANTIOXIDANTS IN DIETS FOR EUROPEAN SEABASS UNDER A CIRCULAR ECONOMY CONTEXT
- 10.40 Tiziana Bongiorno**, Andrea Di Biase, Mauro Vasconi, Vittorio M. Moretti, A. Lopez, Aldo Tava, Domenico Carminati, Giuliana D'Imporzano, Marina Montedoro, Fabrizio Adani, Gabriel F. Ación Fernández, Javier F. Alarcón, Katia Parati
GROWTH PERFORMANCE AND QUALITY TRAITS OF SIBERIAN STURGEON *A. baerii* JUVENILES FED DIETS INCLUDING *Nannochloropsis gaditana* AND *Scenedesmus almeriensis* MICROALGAE MEAL
- 11:20 BREAK**
- 11:45 PLENARY 3 – POSTER AWARDS – LUNCH**
- 14.30 M. Ferreira**, P. Campelos, M.L. Nunes, V. Barbosa, M. Barata, A. Marques, L. Ribeiro, P. Pousão-Ferreira, J. Dias, S. Sousa, V.F. Domingues, L.M.P. Valente
BIO-FORTIFICATION OF GILTHEAD SEABREAM *Sparus aurata* WITH DIETS CONTAINING ALGAE AND SELENISED YEAST
- 14.50 Marta Carvalho**, Ramón Fontanillas, Grethe Rosenlund, Daniel Montero, Marisol Izquierdo
THE COMBINATION OF POULTRY AND ALGAE OILS AS REPLACERS OF FISH OIL IN DIETS FOR GILTHEAD SEA BREAM *Sparus aurata* FINGERLINGS
- 15.10 Ana Catarina Matias**, Marisa Barata, Ravi Luna Araujo, Jorge Dias, Pedro Pousão-Ferreira
TAURINE MODULATES PROTEIN TURNOVER IN SEVERAL TISSUES OF MEAGRE JUVENILES FED WITH PLANT-BASED DIETS

THURSDAY

- 15.30 David San Martin**, Bruno Iñarra, Mikel Orive, Alicia Estevez, Joan Nazzaro, Ricard Fenollosa, José Miguel Martínez, Anna-Maria De Smet, Jaime Zufia
BREWERS' SPENT YEAST AND GRAIN AS ALTERNATIVE INGREDIENTS FOR AQUACULTURE FEED
- 15.50 Ivan Viegas**, Mariana Palma, Francisca Silva-Brito, Emanuel Silva, João Rito, Paulo Rema, Elisabeth Plagnes-Juan, Stéphane Panserat, Leonardo Magnoni
METABOLIC UTILIZATION OF DIETARY GLYCEROL BY RAINBOW TROUT *Oncorhynchus mykiss*: A MULTI-TRIAL EVALUATION
- 16.10 Jon Øvrum Hansen**, Leidy Lagos, Peng Lei, Felipe Eduardo Reveco-Urzuá, Ricardo Tavares Benicio, Line Degn Hansen, Liv Torunn Mydland, Margareth Øverland
DO DOWN-STREAM PROCESSING OF BAKERS YEAST *Saccharomyces cerevisiae* AFFECT DIGESTIBILITY AND IMMUNE RESPONSE IN ATLANTIC SALMON *Salmo salar*?
- 16.30 Luis Conceicao**, Filipe Soares, Ana Nobre, Tomé Silva
PREDICTING LONG-TERM EFFECTS OF SMALL CHANGES IN AQUAFEEDS PERFORMANCE USING A DYNAMIC METABOLIC MODEL

SELECTIVE BREEDING

Thursday, October 10 09.00 - 16.50 Room 2

Chairs: Christos Palaikostas, Marc Vandeputte

- 09.00 Hugues de Verdal**, Marc Vandeputte, François Allal, Mathieu Besson, Wagdy Mekkawy, Dirk-Jan de Koning, John A.H. Benzie
ARE GENETICS AND GENOMICS HELPFUL TO IMPROVE FEED EFFICIENCY IN NILE TILAPIA *Oreochromis niloticus*?
- 09.20 Hanne Dvergedal**, Jørgen Ødegård, Margareth Øverland, Liv Torunn Mydland, Gunnar Klemetsdal
NOVEL INDICATOR TRAITS FOR FEED EFFICIENCY IN ATLANTIC SALMON *Salmo salar*
- 09.40 Marc Vandeputte**, Clémence Frasin, Pierrick Haffray, Anastasia Bestin, François Allal, Martin Prchal, Martin Kocour, Mathilde Dupont-Nivet
HOW TO GENETICALLY INCREASE FILLET YIELD IN FISH: RELEVANT GENETIC PARAMETERS AND METHODS FOR THE ESTIMATION OF GENETIC GAIN
- 10.00 Martin Prchal**, Martin Kocour, Marc Vandeputte, Antti Kause, Alain Vergnet, Jinfeng Zhao, David Gela, Lucie Genestout, Anastasia Bestin, Pierrick Haffray, Jérôme Bugeon
MORPHOLOGICAL PREDICTORS OF SLAUGHTER YIELDS USING 3D DIGITIZER AND THEIR UTILIZATION IN COMMON CARP BREEDING PROGRAM
- 10.20 Anne Kettunen**, Hooi Ling Khaw, Dennis Brandborg Nielsen, Borghild Hillestad, Hooman Moghadam
SLAUGHTER QUALITY OF ATLANTIC SALMON *Salmo salar* USING COMPUTERIZED TOMOGRAPHY
- 10.40 Samuel Bekele Mengistu**, Han A. Mulder, John A.H. Benzie, Hans Komen
GENETIC PARAMETERS FOR RESILIENCE BASED ON FLUCTUATIONS IN BODY WEIGHT IN NILE TILAPIA GROWN IN AERATED AND NON-AERATED PONDS

- 11.00 Clemence Fraslin**, A. Bestin, N. Dechamp, J. D'Ambrosio, F. Krieg, E. Belmonte, C. Poncet, P. Hocde, P. Haffray, Y. Guiguen, F. Phocas, E. Quillet
GWAS REVEALS SEVERAL GENOMIC REGIONS GOVERNING SPONTANEOUS XX-MALENESS IN RAINBOW TROUT
- 11:20 BREAK**
- 11:45 PLENARY 3 – POSTER AWARDS – LUNCH**
- 14.30 Luca Bargelloni**, Oronzo Tassiello, Ludovica Montanucci, Massimiliano Babbucci, Serena Ferraresso, Paolo Carnier
EXPLORING MACHINE LEARNING METHODS FOR GENOMIC PREDICTION OF DISEASE RESISTANCE AND BODY LENGTH IN THE GILTHEAD SEA BREAM
- 14.50 Christos Palaikostas**, Henrik Jeuthe, Dirk-Jan Koning
IMPLEMENTATION OF LOW COVERAGE GENOTYPE BY SEQUENCING IN THE SELECTIVE BREEDING PROGRAM OF ARCTIC CHARR *Salvelinus alpinus* IN SWEDEN
- 15.10 Binyam Dagnachew**, Solomon Antwi Boison, Matt Baranski
IMPUTATION AND GENOMIC PREDICTION ACCURACIES FOR SEA LICE RESISTANCE IN ATLANTIC SALMON
- 15.30 Rama Banger**, Sergio Vela-Avitua, Marie Lillehammer, Marcela Salazar, Morten Rye, Edna Constanza Erazo, Andres Suarez, James Cock, Nicholas Robinson
GENOMIC SELECTION TO IMPROVE WHITE SPOT SYNDROME VIRUS (WSSV) RESISTANCE IN A *Litopenaeus vannamei* BREEDING PROGRAM
- 15.50 Alejandro Gutierrez**, Jane Symonds, Nick King, Konstanze Steiner, Tim Bean, Ross Houston
POTENTIAL OF GENOMIC SELECTION FOR THE IMPROVEMENT OF PACIFIC OYSTER RESISTANCE TO OSTREID HERPESVIRUS (OSHV-1)
- 16.10 Sara Faggion**, Daniela Bertotto, Massimiliano Babbucci, Giulia Dalla Rovere, Rafaella Franch, Mauro Bovolenta, Stanislas Laureau, Francesco Pascoli, Anna Toffan, Luca Bargelloni, Paolo Carnier
GENETIC AND GENOMIC PARAMETERS FOR VNN RESISTANCE, BODY WEIGHT AND CORTISOL CONCENTRATION IN EUROPEAN SEA BASS *Dicentrarchus labrax* L.

MOLLUSC PRODUCTION AND RESTORATION

Thursday, October 10 09.00 - 16.50 Room 3

Chair: Camille Saurel

- 09.00 Pernille Nielsen**, Camille Saurel, Pedro S. Freitas, Pascal Barreau, Lene Friis Moller, Jens Kjerulf Petersen
IS THERE A NEED FOR FLAT OYSTER *Ostrea edulis* RESTORATION IN DENMARK?
- 09.20 Linda Tonk**, Pauline Kamermans, Remment ter Hofstede, Tony van der Hiele, Tjeerd Bouma, Tom van der Have, Karin Didden
FLAT OYSTER *Ostrea edulis* RESTORATION IN OFFSHORE WIND PARKS: AN OPPORTUNITY FOR INNOVATION OF SCOUR PROTECTION

- 09.40 Susanne Vogeler**, Xiaoxu Li, Garry H. Wikfors, Stefano Carboni, Alyssa Joyce
N-METHYL-D-ASPARTATE RECEPTOR AND NITRIC OXIDE PATHWAYS AS POTENTIAL REGULATORS OF LARVAL METAMORPHOSIS IN BIVALVE SPECIES: INVESTIGATION OF NEW PATHWAYS FOR COMMERCIAL HATCHERY APPLICATIONS
- 10.00 Kristina Arranz**, Iñaki Urrutxurtu, Irrintzi Ibarrola, Miren Bego Urrutia, Daniel Prieto, Enrique Navarro
SEED CONDITION AND DIETARY N CONTENT AFFECTS C/N HOMEOSTASIS IN TISSUES OF JUVENILE CLAMS *Ruditapes philippinarum*
- 10.20 Eva Hartog**, Tony van der Hiele, Jouke Heringa, Niels Wagenaar, Jacob Capelle
COPING WITH THE INVASIVE JAPANESE OYSTER DRILL *Ocenebrellus inornatus* ON OYSTER CULTURE PLOTS
- 10.40 Kati Michalek**, David Vendrami, Michaël Bekaert, Joanna Wilson, David Green, Thomas Wilding, Kim Last, Joseph Hoffman
SPECIES COMPOSITION, INTROGRESSION AND SHELL PLASTICITY IN FARMED *Mytilus* spp. ON THE WEST COAST OF SCOTLAND
- 11:20 BREAK**
- 11:45 PLENARY 3 – POSTER AWARDS – LUNCH**
- 14.30 Ramón Filgueira**, Leah Strople, Tore Strohmeier, Samuel Rastrick, Øivind Strand
MUSSELS OR TUNICATES: THAT IS THE QUESTION. EVALUATING EFFICIENT AND SUSTAINABLE RESOURCE USE BY LOW-TROPHIC SPECIES IN AQUACULTURE SETTINGS
- 14.50 Anna-Lucia Buer**, Lukas Ritzenhofena, Marie Maarb, Gerald Schernewskia
PRODUCTION POTENTIAL OF BLUE MUSSEL *Mytilus* spp. FARMING ALONG THE SALINITY GRADIENT OF THE GERMAN BALTIC SEA
- 15.10 M. Maar**, A. Holbach, K. Timmermann, D. Taylor
SPATIAL MODELLING OF BLUE MUSSEL FARM PRODUCTION POTENTIAL IN THE WESTERN BALTIC SEA
- 15.30 Daniel Taylor**, Camille Saurel, Pernille Nielsen, Finn Bak, Niels-Peter Nielsen, Jens Kjerulf Petersen
OPTIMIZING PRODUCTION OF MITIGATION MUSSELS
- 15.50 Gerald Schernewski**, Rene Friedland
ZEBRA-MUSSEL (DREISSENA) CULTIVATION IN BALTIC COASTAL WATERS – AN OPTION FOR BLUE GROWTH AND WATER POLICY IMPLEMENTATION?
- 16.10 Lars Kjerulf Petersen**, Nardine Stybel
LOCAL ACCEPTANCE OF MUSSEL CULTIVATION IN THE BALTIC SEA
- 16.30 Andrew van der Schatte Olivier**, S.K. Malham, L. Le Vay, M. Christie, J. Wilson, S. Allender, S. Schmidlin, J. Brewin, L. Jones
POTENTIAL FOR USING MUSSEL FARMING *Mytilus edulis* IN NUTRIENT REMEDIATION IN ESTUARIES OF THE UNITED KINGDOM

PERCID FISH

Thursday, October 10 09.00 - 16.50 Festival

Chair: Daniel Zarski

- 09.00 Carole Rougeot**
REVIEW ON SEX DETERMINATION PROCESS, ALL-FEMALE PRODUCTION AND GROWTH PERFORMANCES IN EURASIAN PERCH *Perca fluviatilis*
- 09.20 Marcus Stüeken**, Tobias Rapp, Fabian Schäfer, Daniel Zarski, Ralf Bochert, Werner Kloas
THE EFFECT OF LIGHT SPECTRUM ON GONADAL DEVELOPMENT IN PIKEPERCH *Sander lucioperca* (L., 1758)
- 09.40 Oleksandr Malinovskiy**, Lukáš Veselý, Miroslav Blecha, Jiří Kříž, Tomáš Polícar
THE SUBSTRATE SELECTION AND SPAWNING BEHAVIOR OF PIKEPERCH *Sander lucioperca* L. BROODSTOCK UNDER POND CONDITIONS
- 10.00 Leila El Mohajer**, Sirine Selmi, Pascal Fontaine, Sylvain Milla
THE SEARCH FOR THE MATURATIONS INDUCING STEROID (MIS) IN EURASIAN PERCH *Perca fluviatilis*
- 10.20 Uros Ljubobratovic**, Ferenc Demeny, Geza Peter, Oleksandr Malinovskiy, Maciej Kwiatkowski, Andras Ronyai, Akos Horvath
THE EFFECT OF DIFFERENT HORMONAL INDUCTION STRATEGIES ON PIKEPERCH *Sander lucioperca* L. GAMETE QUALITY OBTAINED AFTER OUT-OF-SEASON ARTIFICIAL REPRODUCTION
- 10.40 Daniel Zarski**, Gergely Bernath, Imen Ben Ammar, Sebastien Baeckelandt, Zoltan Bokor, Pascal Fontaine, Akos Horvath, Patrick Kestemont, Syaghalirwa N.M. Mandiki
REPEATED HORMONAL INDUCTION OF SPERMATION AFFECTS STRESS BUT NOT IMMUNE RESPONSE IN PIKEPERCH *Sander lucioperca*
- 11.00 Gergely Bernáth**, Levente Várkonyi, Ferenc Fodor, Tamás Koltai, Ádám Bodnár, József Molnár, Levente Zete Láng, Tibor Izsák, Árpád Ferincz, Ádám Staszny, Béla Urbányi, Zsolt Szári, Zoltán Bokor
THE METHODOICAL IMPROVEMENT OF SPERM CRYOPRESERVATION IN VOLGA PIKEPERCH *Sander volgensis*
- 11:20 BREAK**
- 11:45 PLENARY 3 – POSTER AWARDS – LUNCH**
- 14.30 Edson Panana**, S. Teerlinck
EFFECT OF PHOTOPERIOD ON PIKEPERCH *Sander lucioperca* LARVAE PERFORMANCE IN RECIRCULATING AQUACULTURE SYSTEMS
- 14.50 Aiman Imentai**, Christoph Steinbach, Carlos Yanes-Roca, Tomas Polícar
EFFECT OF FEEDING STRATEGY WITH ROTIFERS *Brachionus plicatilis* ON PIKEPERCH *Sander lucioperca* LARVAL PERFORMANCE
- 15.10 Katarzyna Palinska-Zarska**, Piotr Niewiadomski, Jaroslaw Król, Daniel Zarski
NUTRITIONALLY CHALLENGED EURASIAN PERCH LARVAE *Perca fluviatilis* SHEDS LIGHT ON ADAPTABILITY OF FISH TO COMPOUND DIET

- 15.30 Sandra Langi**, Edson Panana, Ceder Alloo, Gilbert Van Stappen, Wouter Meeus
REPLACEMENT OF FISH MEAL USING ALTERNATIVE PROTEIN SOURCE IN FEEDS FOR
PIKEPERCH *Sander lucioperca* DURING GROW OUT PHASE
- 15.50 Stefan Heidemann**, Marcus Stüeken, Ralf Bochert, Tobias Rapp
THE EFFECT OF LIGHT COLOUR ON PERFORMANCE PARAMETER OF JUVENILE
PIKEPERCH *Sander lucioperca*
- 16.10 Tobias Rapp**, Moritz Tielmann, Ralf Bochert, Marcus Stüeken
FEEDING MANAGEMENT OF JUVENILE PIKEPERCH *Sander lucioperca* UNDER
PRODUCTION CONDITIONS
- 16.30 Alain Pasquet**, Marielle Thomas, Yannick Ledoré, Lucas Schaeffer, Sarah Nahon,
Joël Aubin, Christophe Jaeger, Aurélie Wilfart, Alain Benard, Thomas Lecocq
ICHTHYODIVERSITY AS A DRIVING FORCE TO PROMOTE NEW AGRO-ECOLOGICAL
APPROACH FOR *Sander lucioperca* REARING

AQUACULTURE IN CENTRAL AND EASTERN EUROPE

Thursday, October 10 09.00 - 16.50 Backstage 1

Chair: Laszlo Varadi

- 09.00 Gennady G. Matishov**, Elena N. Ponomareva, Marina N. Sorokina
PRESENT BIOTECHNOLOGY OF AQUACULTURE OF SOUTH RUSSIA
- 09.20 Koushik Roy**, Mario Precanica, Petr Dvorak, Jaroslav Vrba, Sadasivam J. Kaushik,
Jan Mráz
IS THERE A EUTROPHICATION CONCERN IN SUPPLEMENTARY FEED BASED COMMON
CARP FARMING?
- 09.40 Eva Kerepeczki**, Péter Palásti, G. Gyalog
ECOSYSTEM SERVICES PROVIDED BY FRESHWATER FISHPONDS
- 10.00 Szilvia Keszte**, Kata Tóth-Ihász, Réka Balogh, Árpád Ferincz, Ádám Stasznyi,
Vilmos Józsa, Béla Urbányi, Balázs Kovács
MOLECULAR GENETIC DIVERSITY OF HUNGARIAN SILVER PRUSSIAN CARP *Carassius
auratus gibelio* POPULATIONS BASED ON MITOCHONDRIAL D-LOOP SEQUENCES
- 10.20 Béla Urbányi**, Balázs Kriszt, Sándor Szoboszlay, Judit Háhn, László Friedrich,
Gábor Jónás, Gergely Bernáth, Zsolt Csenki-Bakos, Zsolt Czimmerer, Péter Palotás,
Katalin Rákóczi, Zsófia Tarnai-Király, Brigitta Nyiro-Fekete, Gábor Bordós, László Zanathy,
Adrienn Micsinai
INTRODUCTION OF THE ENVIRONMENT AND FOOD SAFETY RISKS OF POND FISH
PRODUCTION – CAN CARP CONSUMERS BE SATISFIED?
- 10.40 Alexandre Tahar**, Alan Kennedy, Ronan Cooney, Sarah Naughton, Emer O'Neill,
Siobhan Kavanagh, Andy Fogarty, Neil Rowan, Eoghan Clifford
SUPPORTING THE SUSTAINABLE DEVELOPMENT OF THE IRISH FRESHWATER
AQUACULTURE INDUSTRY
- 11.00 Edouard Royer**, Daniele Brigolin, Roberto Pastres
IMPLEMENTING PRECISION FISH FARMING ON A RAINBOW TROUT FARM: A DATA
ASSIMILATION APPROACH

PATHOGENS, DISEASES AND TREATMENT

Thursday, October 10 09.00 - 16.50 Room 1

Chairs: Giorgos Rigos, Egdar Brun

09.00 Gabriel Arriagada

THE ROLE OF EPIDEMIOLOGY IN THE SURVEILLANCE AND CONTROL OF PREVALENT FISH DISEASES – THE CASE OF SEA LICE IN FARMED SALMONIDS IN CHILE

09.20 Tülay Akayli, Ozgur Canak, Remziye Eda Yardimci, Cigdem Urku, Dilek Okmen

ENTEROBACTER INFECTIONS OF CULTURED RAINBOW TROUT *Oncorhynchus mykiss*

09.40 Trina Galloway, Jacob Seilø Torgersen, Jørgen Ødegård, Tim Martin Knudsen

ROBUST SALMON SKIN – IS THERE A GENETIC COMPONENT?

10.00 Carolina Barroso, J.V. Neves, P.N.S. Rodrigues

THE MULTIPLE FUNCTIONS OF PISCIDINS IN THE EUROPEAN SEA BASS *Dicentrarchus labrax*

10.20 Mikolaj Adamek, Marek Matras, Andy Dowson, Verena Jung-Schroers, Veronika Piackova, David Gela, Martin Kocour, Jerzy Adamek, Rafal Kaminski, Michal Reichert, Dieter Steinhagen

COMPREHENSIVE APPROACH TO DEVELOPMENT OF COMMON CARP STRAINS RESISTANT TO DISEASES CAUSED BY INFECTIONS WITH CYHV-3, CEV AND SVCV

10.40 Jose Gallardo, Carolina Figueroa, Pamela Veloso, Lenin Espin, Debora Torrealba, Juan Manuel Afonso, Carlos Soto, Drian Dixon, Pablo Conejeros

FAMILIAR VARIATION EXPLAINS REDUCED PROTECTION OF COMMERCIAL VACCINES AGAINST BACTERIAL PATHOGENS IN ATLANTIC SALMON

11.00 Lluís Tort, Felipe E. Reyes-López, Xiaohong Liu, Ali R. Khansari, Mariana Teles, Gonzalo Martínez, Juan M. Mancera

VACCINES INDUCE A SIGNIFICANT IMMUNE RESPONSE BUT NOT A ROBUST NEUROENDOCRINE REACTION IN BRAIN AND PITUITARY TISSUES OF SEABREAM *Sparus aurata*

11:20 BREAK

11:45 PLENARY 3 – POSTER AWARDS – LUNCH

14.30 Paul J. Midtlyng

NUCLEIC ACID VACCINES ARE EFFECTIVE FOR CONTROL OF VIRAL INFECTIONS AND DISEASE IN SALMONID AQUACULTURE

14.50 Hans Petter Kleppen, Eirik Baardsen, Juan J.J. Martinez, Ingrid S. Larsen, Cyril Frantzen

USE OF BACTERIOPHAGES TO CONTROL *Yersinia ruckeri* IN SALMON FARMING

15.10 Hector Abelardo Ocampo, Andres Vasavilbazo-Saucedo, Norma Alamaraz-Abarca

ANTIVIRAL EFFECTS IN *L. vannamei* OF FEED ADDITIVE OF MICROENCAPSULATED PHENOLIC EXTRACTS OF *M. umbellata*

THURSDAY

- 15.30 Parini Manuela**, Matteo Calligaris, Alessio Paoli
1-MONOGLYCERIDES OF SHORT- AND MEDIUM-CHAIN FATTY ACIDS PROVED TO BE EFFECTIVE IN DECREASING THE MORTALITY CAUSED BY *Flavobacterium psychrophilum* AND IN REDUCING THE ANTIBIOTIC TREATMENTS IN RAINBOW TROUT *Oncorhynchus mykiss*, WITH FAVORABLE ECONOMIC RETURN FOR THE FISH PRODUCERS
- 15.50 Dibo Liu**, Thomas Meinelt, David L. Straus, Petra Bartschat
TOXICITY OF PERACETIC ACID (PAA) PRODUCTS: IMPACT OF WATER QUALITY, PRODUCT COMPOSITION AND FISH SPECIES
- 16.10 Dimitra Kogiannou**, Chrysanthi Nikoloudaki, Antigoni Vasilaki, Giorgos Pyrenis, Ioannis Nengas, George Rigos
PHARMACOKINETIC COMPARISON OF DIFFERENT DOSING STRATEGIES OF IN-FEED ADMINISTERED PRAZIQUANTEL IN GREATER AMBERJACK *Seriola dumerili*
- 16.30 Claudia Tschesche**, Michaël Bekaert, James E. Bron, Armin Sturm
DELTAMETHRIN RESISTANCE IN SALMON LICE: MITOCHONDRIAL AND NUCLEAR SINGLE NUCLEOTIDE MARKERS

GENERAL TOPICS SESSION

Thursday, October 10 09.00 - 16.50 Foyer 4

Chair: Ana Viskovic, Olarinke Victoria Adeniyi

- 09.00 Diogo Thomaz**
THE POTENTIAL OF ARTIFICIAL INTELLIGENCE TO SUPPORT AQUACULTURE FARM MANAGERS: PRELIMINARY RESULTS OF THE APPLICATION OF MACHINE LEARNING ALGORITHMS FOR THE EARLY PREDICTION OF BATCH PERFORMANCE
- 09.20 Mohamad Fadjar**, Sri Andayani, Chung-Hun Liu, Jefri Anjaini
EFFECTS OF SQUID *Loligo* sp. INK EXTRACT TO WHITE SHRIMP *Litopenaeus vannamei* CypA GENE POLYMORPHISM IN WHITE FECES SYNDROME (WFS) CASE
- 09.40 Michael Besmer**, Frederik Hammes, Konstanze Schiessi
MONITORING SHORT-TERM MICROBIOLOGICAL DYNAMICS WITH FULLY AUTOMATED ONLINE FLOW CYTOMETRY IN REALTIME
- 10.00 Rayaprolu Srinivas**
EFFECT OF ORGANIC ACIDS IN GROWTH, SURVIVAL AND CONTROLLING CONTINUOUS MORTALITIES OF *Litopenaeus vannamei* CULTURE AT KATTUKALAVA, WEST GODAVARI DISTRICT, ANDHRA PRADESH, INDIA
- 10.20 Majid Mohammad Nejad**, Hajimohammad Shirmohammadli
CHANGES IN PROTEIN, FAT, ASH AND DRY MATTER IN DIFFERENT WEIGHTS OF COMMON CARP
- 10.40 Inmaculada González Cabrera**, Elena Proietti, Ricardo Haroun Tabraue
THE DEVELOPMENT OF AQUACULTURE IN THE CANARY ISLANDS: NEW PERSPECTIVES AFTER THE PUBLICATION OF THE "PROAC" AND THE "NEW CANARY AUTONOMY STATUTE"
- 11.00 Nyiko C. Mabasa**, Clifford L.W. Jones, Mark Laing
SOLVING THE PROBLEM OF SALT ACCUMULATION IN RECYCLED BREWERY EFFLUENT THROUGH THE INTEGRATION OF WATER TREATMENT, AGRICULTURE AND AQUACULTURE

11:30 PLENARY 3 – POSTER AWARDS – LUNCH

- 14.30 Mohammad Sayyadbourani**, Mohammad Pourkazemi, Alireza Valipour, Seied Reza Seied Mortezaei
MONOCULTURE OF PIKEPERCH *Sander lucioperca* IN INTENSIVE SYSTEM OF IRAN
- 14.50 Olarinke Victoria Adeniyi**, Faith Omowumi Dosunmu
GROWTH RESPONSE AND BLOOD INDICES OF AFRICAN SHARPTOOTH CATFISH *Clarias gariepinus* TO DIETS FORTIFIED WITH WILD LETTUCE *Latuca virosa* LEAF EXTRACT
- 15.10 Javad Daghigh Roohi**, Abdolhossein Dalimi, Mohammad Pourkazemi, Mohaddes Ghasemi, Shokoofeh Shamsi
MOLECULAR AND PHYLOGENETIC ANALYSIS OF *Dactylogyrus spp.* PARASITES IN CULTIVATED SILVER CARP *Hypophthalmichthys molitrix* AND BIG HEAD CARP *Hypophthalmichthys nobilis* IN IRAN
- 15.30 Yenitze Fimbres Acedo**, Mauricio Emerenciano, Masato Endo, Kevin Fitzsimmons, Rodolfo Garza, Rosalia Servin, Francisco Magallon
TILAPIA PRODUCTION WITH BIOFLOC TECHNOLOGY IN THREE DIFFERENT TROPHIC CONDITIONS
- 15.50 Yenitze Fimbres Acedo**, Mauricio Emerenciano, Kevin Fitzsimmons, Masato Endo, Rodolfo Garza, Rosalia Servin, Francisco Magallon
HYDROPONIC CULTURE IN NFT USING EFFLUENTS FROM BIOFLOC TECHNOLOGY IN THREE DIFFERENT TROPHIC CONDITIONS

PLENARY 3 AND POSTER AWARDS

Thursday, October 10 11.45 - 12.50 Europe Hall

Chair: Stefan Meyer

- 11.45 Dina Dziuba**
MANAGING RISKS IN A CHANGING ENVIRONMENT

CAGE SYSTEMS AND OFFSHORE STRUCTURES

Thursday, October 10 14.30 - 16.50 Room 5

Chairs: Bela Buck, Hans Bjelland

- 14.30 Heidi M. Føre**, P.C. Endresen, Grim Eidnes, Morten Bondø, Carina Norvik, Andrei Tsarau, David Kristiansen, David Kristiansen, Hans V. Bjelland
HYDRODYNAMIC LOADS ON EXPOSED FISH FARMS
- 14.50 Kevin Heasman**, Malcolm Smeaton, Nicholas Scott, Bela H. Buck
THE INFLUENCE OF STRUCTURE ORIENTATION TO WATER CURRENTS AND WAVES AND THE EFFECT OF WATER DEPTH ON STRUCTURAL STRESS AND SHELLFISH RETENTION IN EXPOSED OCEAN ENVIRONMENTS
- 15.10 Ajje B.K. Pribadi**, Luca Donatini, Evert Lataire
MUSSEL CULTIVATION IN THE BELGIAN NORTH SEA

- 15.30 Maximilian Felix Schupp**, Gesche Krause, Vincent Onyango, Bela H. Buck
MULTI-USE POTENTIAL OF MARINE AQUACULTURE WITHIN OFFSHORE WIND FARMS IN THE GERMAN BIGHT: A SWOT ANALYSIS
- 15.50 Laurent Barillé**, Stéphanie Palmer, Pierre Gernez, Yoann Thomas, Stefan Simis, Philippe Glize
SATELLITE-MAPPED BIOLOGICAL POTENTIAL FOR MOVING PACIFIC OYSTER AQUACULTURE OFFSHORE
- 16.10 Mark Capron**, Michael Chambers, Jim Stewart, Kelly Lucas, Zach Moscicki, Corey Sullivan, Stacy Krueger-Hadfield
RESTORATIVE AQUACULTURE WITH OFFSHORE STRUCTURES
- 16.30 Nina Bloecher**, Kevin Frank, Lionel Eisenhauer, Morten Bondø, Oliver Floerl
THE IMPACTS OF BIOFOULING CONTROL MEASURES ON FISH HEALTH AND INFRASTRUCTURE, AND HOW TO MITIGATE THEM

HATCHERY TECHNOLOGIES AND PRACTICES

Thursday, October 10 14.30 - 16.50 Exhibition 2

Chair: Ignacio Fernandez Monzon

- 14.30 Barbara Loi**, Francesca Leggieri, Gemma Giménez Papiol, Dario Vallanc
GROWTH RATE AND SURVIVAL IN JUVENILES OF GREY MULLET *Mugil cephalus* REARED UNDER THREE SALINITY LEVELS
- 14.50 Vincenzo Alessandro Laudicella**, Christine Beveridge, Stefano Carboni, John Day, Mary K. Doherty, Elaine Mitchel, Michele Stanley, Phil D. Whitfield, Adam D. Hughes
LIPIDOMICS: SPOT ON LIPID METABOLISM DURING NURSERY PRODUCTION OF JUVENILE BLUE MUSSELS *Mytilus edulis* L. REARED UNDER DIFFERENT DIET REGIMES
- 15.10 Wilson Pinto**, Sofia Engrola, Bruno Nunes, Rita Colen, André Santos, André Lopes, Luís E.C. Conceição
IMPROVING MICRODIET TECHNOLOGY FOR FIRST-FEEDING GILTHEAD SEABREAM *Sparus aurata* LARVAE
- 15.30 Jan Giebichenstein**, Julia Giebichenstein, Christopher Heiduk, Björn Ronge, Casten Schulz
BALLAN WRASSE *Labrus bergylta* LARVAL REARING, A COMPARATIVE STUDY OF DIFFERENT FEEDING REGIMES AND MICRO DIETS BASED ON THE COPEPOD *Acartia tonsa* AS START FEED
- 15.50 Sebastian Nikitas Politis**, E. Syropoulou, E. Benini, S.R. Sørensen, I.A.E. Butts, J.J. Miest, D. Mazurais, A. Servili, J.-L. Zambonino-Infante, J. Tomkiewicz
SALINITY REDUCTION BENEFITS EUROPEAN EEL LARVAE: AN OVERVIEW
- 16.10 Sune Riis Sørensen**, E. Syropoulou, S.N. Politis, E. Benini, A.C. Hambly, J. Tomkiewicz
IMPACT OF WATER PURIFICATION AND CONDITIONING ON *IN VITRO* PRODUCED EMBRYOS AND LARVAE OF EUROPEAN EEL *Anguilla anguilla*
- 16.30 Stefan Spreitzenbarth**, Andrew Jeffs
ARTIFICIAL WORLD – NEW INSIGHTS ON OCTOPUS EGG REARING AND LARVAL FEEDING BEHAVIOUR

LABORATORY AQUATIC MODELS AND ORNAMENTALS

Thursday, October 10 14.30 - 16.50 Exhibition 1

Chair: Julien Bobe

- 14.30 Julien Bobe**, Caroline Cheung, Thaovi Nguyen, Stephanie Gay, Amelie Patinote, Emilie Cardona, Violette Thermes
WHAT MAKES A FISH EGG ABLE TO BE FERTILIZED AND SUBSEQUENTLY DEVELOP INTO AN EMBRYO: NEW INSIGHTS FROM CRISPR/CAS9 GENOME EDITING IN MODEL SPECIES
- 14.50 Laia Ribas**, J. Moraleda-Prados, M. Caballero-Huertas, S. Joly, N. Roher
ZEBRAFISH AND LPS, MODEL TOOLS FOR DECIPHERING EPIGENETIC CHANGES DURING SEX DIFFERENTIATION
- 15.10 J. Min**, Rob Knight, Barbara Nowak, Todd Michael, Eric Allen
DEVELOPMENT OF A *Scrombidae* MODEL MARINE FISH FOR DISEASE ECOLOGY, PACIFIC CHUB MACKEREL
- 15.30 Ana P.L. Costa**, Igor S. Bernardo, Davide A.M. Silva, Andreia C.M. Rodrigues, Catarina R. Marques, Amadeu M.V.M. Soares, Rui J.M. Rocha
TESTING DIFFERENT PROTOTYPE DIETS FOR CORAL AQUACULTURE
- 15.50 Guro Løkka**, Alexander Jaramillo-Torres, Karina Gajardo, Jorge Arturo Vargas-Abúndez, Elvis Chikwati, Elin Valen, Trond M. Kortner, Åshild Krogdahl
ADULT ZEBRAFISH AS MODEL ANIMAL FOR THE EVALUATION OF POSSIBLE HEALTH EFFECTS OF SEAWEEDS IN THE DIET
- 16.10 Boris Gomelsky**, Jeffrey Warner, Noel Novelo, Alexander Kramer, Brandylyn Thomas
INHERITANCE AND EXPRESSION OF RED-EYE KOI MUTATION IN KOI *Cyprinus carpio* × GOLDFISH *Carassius auratus* HYBRIDS
- 16.30 Antonia Theodoridi**, Michail Pavlidis, Luisa Dalla Valle, Aleka Tsalafouta
BEHAVIORAL DIFFERENCES IN COPING STYLES BETWEEN WILD-TYPE AND GR-KNOCKOUT ZEBRAFISH GENERATED WITH THE CRISPR/CAS9 TECHNOLOGY

SHRIMP

Thursday, October 10 14.30 - 16.50 Exhibition 2

Chair: Matt Slater

- 14.30 Joao Reis**, Melanie Rhodes, D. Allen Davis
IMPROVING AUTOMATIC FEEDING PROTOCOLS IN SEMI-INTENSIVE POND CULTURE OF PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 14.50 Alexandra Segelken-Voigt**, Ralf Bochert
GROWTH PERFORMANCE AND SURVIVAL OF WHITELEG SHRIMP *Penaeus vannamei* UNDER VARYING STOCKING DENSITIES
- 15.10 Gerardo Rodríguez-Quiroz**, Arturo Polanco-Torres, Píndaro Álvarez-Ruíz
EARTHWORM VERMICOMPOST TO ENHANCE SHRIMP WHITE SHRIMP *Litopenaeus vannamei* GROWTH AND INHIBIT AHPND DISEASE IN A EXPERIMENTAL CULTURE

- 15.30 Eran Hadas**, Asaf Elkayam, David Hazut
MOLTING CAN BE A MAJOR CAUSE OF MORTALITY IN INTENSIVE SYSTEMS (RAS) FOR SHRIMP *Litopenaeus vannamei* CULTURE
- 15.50 Yustian Rovi Alfiansah**, Sonja Peters, Jens Harder, Christiane Hassenrück, Astrid Gärdes
STRUCTURE AND CO-OCCURRENCE PATTERNS OF BACTERIAL COMMUNITIES ASSOCIATED WITH WHITE FAECES DISEASE OUTBREAKS IN THE PACIFIC SHRIMP *Litopenaeus vannamei*
- 16.10 Vikash Kumar**, Peter Bossier, Kartik Baruah
PIRABVP TOXIN MEDIATES *IN VIVO* PATHOGENICITY OF *Vibrio parahaemolyticus* AHPND STRAIN: ROLE OF NOVEL PLANT-BASED HSP70 INDUCING COMPOUND IN PROTECTION AGAINST AHPND STRAIN IN SHRIMP SPECIES
- 16.30 Ulfert Focken**, Juliana Schober Goncalves Lima
ORGANIC AND CONVENTIONAL MARINE SHRIMP FARMS IN BRAZIL: MACROBENTHOS OCCURRENCE INSIDE AND IN THE OUTLETS OF THE PONDS

NACEE PANEL – AQUACULTURE IN CENTRAL AND EASTERN EUROPE

Thursday, October 10 14.30 - 16.50 Backstage 1

Chair: Laszlo Varadi

Concept

The Central and Eastern European (CEE) region of Europe has certain specific features that make this region a special aquaculture region in Europe, which is sometimes called “pond region” or “carp region”. There are however other specificities as well why we may consider this region a special aquaculture region of Europe. For example, the fish consumption of several countries in the region is among the lowest in Europe. The CEE region includes both EU and non-EU countries and this “interface” character also creates challenges and opportunities in aquaculture development. In spite of the gradual social and economic development in the CEE region, aquaculture development is often constrained by limited resources, not only in terms of money, but, for example, in terms of language knowledge and international collaboration. This is well indicated by the low number of participants in international events from CEE countries and relatively low number of publications in international journals. Only few CEE institutions and organisations are members of project consortia. Multi-stakeholder cooperation is also rather weak in the CEE region where strong producers’ associations exist only in few countries. One of the main NACEE objectives is to bridge the gap that still exists between Eastern and Western Europe in the field of aquaculture. The proposed session could contribute to alleviate the situation and facilitate the improvement of collaboration between East and West.

Moderator: Peter Lengyel, General Secretary of NACEE

- 14:30 Laszlo Varadi, Zsigmond Jeney**
CEE IN THE EUROPEAN AQUACULTURE SCENE
- 14:50 Vitaliy Bekh, Nikolay Barulin, Peter Lengyel**
AQUACULTURE IN CENTRAL AND EASTERN EUROPE: CONSTRAINTS AND OPPORTUNITIES
- 15:10 OPEN DISCUSSION**
- 15:50 CONCLUDING REMARKS**

EDUCATION, KNOWLEDGE MANAGEMENT, TRANSFER AND EXTENSION NETWORKS

Thursday, October 10 14.30 - 16.50 Room 4

Chair: Georgia Bayliss-Brown

- 14.30 Kay Lwin Tun**, Kevin Fitzsimmons, Hillary Egna, Hendrik Stolz, Uwe Scholz, Peter Buri
DEVELOPMENT OF BSC AND MSC FISHERIES AND AQUACULTURE DEGREE PROGRAMS
IN MYANMAR
- 14.50 Lourdes Reig**, Rosa Flos, Eva Vallejos, Felipe Reyes
PERCEPTION ABOUT AQUACULTURE AMONG UNDERGRADUATE STUDENTS;
INFLUENCE OF PERSONAL PROFILE AND PSYCHOGRAPHIC MODULATORS
- 15.10 Natacha Nogueira**, Lydia Png, Carlos Andrade
PUBLIC PERCEPTIONS OF AQUACULTURE IN ATLANTIC ISLANDS: IS THERE ROOM FOR
MSP?
- 15.30 Yik Sung Yeong**, Happy Nursyam, Quoc Phu Truong, Min Pau Tan, Najiah Musa,
Siti Azizah Mohd Nor, Mieke Eggermont, David Bassette, Marieke Reuver,
Patrick Sorgeloos
THE ASEAN FISHERIES EDUCATION NETWORK; ESTABLISHMENT, EXPANSION AND
EXTENSION
- 15.50 Marieke Reuver**, Jane Maher, John Bostock, Yeong Yik Sung
ENHANCING EUROPE-ASIA COOPERATION IN AQUACULTURE EDUCATION –
ACHIEVEMENTS OF THE EU HORIZON2020 PROJECT - EURASTIP
- 16.10 Joseph Molnar**, Isaac Omiat, Moureen Matuha, John Walakira, Gertrude Atukunda,
Theodora Hyuha, James Bukonya
SUSTAINING A MOBILE APPLICATION FOR FISH FARMERS IN UGANDA: POLICY
CONTRADICTIONS, TECHNICAL CAPABILITIES, AND USER NEEDS
- 16.30 John Bostock**, Martyn Haines, John Birger Stav, Marieke Reuver
PROFESSIONAL AQUACULTURE – SUPPORTING SKILLS AND CAREER DEVELOPMENT
IN EUROPEAN AQUACULTURE

COMPOUNDS IN LIPID TRANSPORT

Thursday, October 10 14.30 - 16.50 Lounge 1-3

Chair: Ashild Krogdahl

- 14.30 Åshild Krogdahl**, Anne Kristine Grostøl Hansen, Elvis Chikwati, Michael H. Penn,
Aleksei Krasnov, Ingemar Björkhem, Trond M. Kortner
NUTRIENTS INVOLVED IN DIGESTION AND TRANSPORT OF LIPID ACROSS THE
INTESTINAL MUCOSA OF ATLANTIC SALMON *Salmo salar* L.– PART 1: AN OVERVIEW
- 14.50 Elvis Chikwati**, Paul Midtlyng, Trond M. Kortner, Jie Wang, Yanxian Li, Weiwen Zhou,
Guro Løkka, Alexander Jaramillo-Torres, Åshild Krogdahl
NUTRIENTS INVOLVED IN DIGESTION AND TRANSPORT OF LIPID ACROSS THE
INTESTINAL MUCOSA OF ATLANTIC SALMON – PART 2: LIPID MALABSORPTION IN SIX,
NORWEGIAN ATLANTIC SALMON *Salmo salar* L FARMS

THURSDAY

- 15.10 Trond M. Kortner**, Anne Kristine G Hansen, Elvis Chikwati, Aleksei Krasnov, Ingemar Björkhem, Åshild Krogdahl
NUTRIENTS INVOLVED IN DIGESTION AND TRANSPORT OF LIPID ACROSS THE INTESTINAL MUCOSA OF ATLANTIC SALMON *Salmo salar* L. – PART 3: EFFECTS OF DIETARY CHOLESTEROL, PHOSPHOLIPIDS AND BILE SALTS ON INTESTINAL LIPID METABOLISM
- 15.30 Anne Kristine G. Hansen**, Trond M. Kortner, Elvis Chikwati, Hans J. Grav, Ingemar Björkhem, Vegard Denstadli, Åshild Krogdahl
NUTRIENTS INVOLVED IN DIGESTION AND TRANSPORT OF LIPID ACROSS THE INTESTINAL MUCOSA OF ATLANTIC SALMON *Salmo salar* L.– PART 4: EFFECTS OF DIETARY PHOSPHATIDYLCHOLINE AND CHOLINE ON INTESTINAL LIPID METABOLISM

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