ISFNF 2018 SCIENTIFIC PROGRAM

JUNE 3RD, SUNDAY

15:00 – 20:00  Technical Secretariat opens for registration at the Auditorium Alfredo Kraus

20:30 -22:00  Welcome cocktail at Poema del Mar

JUNE 4TH, MONDAY

08:30 – 09:00  Opening Ceremony

09:00 – 10:30  Session 1: Nutrition and Product Quality
Chairs: Ronald Hardy and Marisol Izquierdo

09.00  Evolutionary aspects of the dietary omega-6/omega-3 fatty acid ratio
Dr. Artemis P. Simopoulos

09.30  Physicochemical properties, flavor associated amino acid composition and inosinic acid content and healthcare fatty acids constituents influenced by nucleotides in the muscle of grass carp (Ctenopharyngodon idellus)
Prof. Lin Feng

09.45  Use of prebiotics and probiotics in Tropical Gar (Atractosteus Tropicus) Juveniles
Dr. Emyr Saúl Peña-Marín

10.00  Effect of elevated temperature on astaxanthin deposition and distribution in the fillet of Atlantic salmon (Salmo salar L.) post-smolt
Mr. Martin Grünenwald

10.15  Site specific environmental conditions shape the productivity of Atlantic salmon farming in Tasmania – insights towards nutritional advancement
Mr. Matthew K. Jago

10:30 – 11:15  Coffee Break

Poster Session 1: Nutrition and Product Quality
Chairs: Genevieve Corraze and Orhan Tufan Eroldogan
Presentations of posters P.1.01 – P.1.16

11:15 – 12:45  Session 2.1: Nutritional Requirements I
Chairs: Brett Glencross y Lidia Robaina

11.15  The role of branched-chain amino acids in the aquaculture of red drum, Sciaenops ocellatus L. – defining dietary requirements and elucidating antagonistic effects
Prof. Delbert Gatlin

11.30  Dietary leucine modulates growth performance, glucose metabolism, antioxidant and immunity related signaling molecules in juvenile blunt snout bream, Megalobrama amblycephala
Prof. Mingchun Ren

11.45  Effects of dietary leucine levels on growth performance, feed utilization, neuro-endocrine growth axis and TOR-related signaling molecule expression in juvenile hybrid grouper (Epinephelus fuscoguttatus ♀ × Epinephelus lanceolatus ♂)
Dr. Gao Yujie
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<tr>
<th>Time</th>
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<tr>
<td>12.00</td>
<td></td>
<td>Dietary methionine spares taurine in sub-adult yellowtail kingfish (Seriola lalandi)</td>
<td>Ms. Caroline Candebat</td>
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<td>12.15</td>
<td></td>
<td>Evaluation of synchronicity of methionine in the hemolymph of Pacific white shrimp Litopenaeus vannamei fed diets containing different methionine sources</td>
<td>Dr. Donald Davis</td>
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<tr>
<td>12.30</td>
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<td>Research progress of color formation and its nutritional regulation of Chinese mitten crab (Eriocheir sinensis)</td>
<td>Prof. Xugan Wu</td>
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<td>12:45–14:15</td>
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<td>Buffet-Lunch</td>
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<tr>
<td>14:15</td>
<td>Session 2.2:</td>
<td>Feeding and nutrition of pikeperch (Sander lucioperca) during early life stages – state of knowledge and perspectives</td>
<td>Prof. Patrick Kestemont</td>
</tr>
<tr>
<td>14.30</td>
<td>Nutritional</td>
<td>Effect of increasing dietary levels of n-3 long-chain polyunsaturated fatty acids on liver composition and histopathology of meagre (Argyrosomus regius, Asso 1801) fingerlings</td>
<td>Ms. Marta Carvalho</td>
</tr>
<tr>
<td>14.45</td>
<td>Requirements II</td>
<td>Requirements of omega-3 fatty acids in Atlantic salmon. Effects of graded feed additions of very long chain n-3 PUFAs on the fatty acid composition of intestinal phospholipid species.</td>
<td>Prof. Magny S. Thomassen</td>
</tr>
<tr>
<td>15.00</td>
<td></td>
<td>Creeping up to freshwater: complementation of the DHA biosynthetic pathway in the lineage of freshwater sole (Pleuronectiformes: Achiridae)</td>
<td>Mr. Yoshiyuki Matsushita</td>
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<tr>
<td>15.15</td>
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<td>The hepatotoxicity of palmitic acid in zebrafish involves the intestinal microbiota</td>
<td>Prof. Zhigang Zhou</td>
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<td>15.30</td>
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<td>Performance, feed utilization and hepatic molecular metabolic response of weaned juvenile Atlantic bluefin tuna (Thunnus thynnus, L.): effect of lipid level and source</td>
<td>Dr. Monica Betancor</td>
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<td>15:45–16:30</td>
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<td>Coffee Break</td>
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**Poster Session 2: Nutritional Requirements**

*Chairs: Shi-Yen Shiau y Grethe Rosenlund*

Presentations P.2.01 – P.2.47
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<tr>
<th>Time</th>
<th>Session 2.3: Nutritional Requirements III</th>
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<tr>
<td>16:30</td>
<td>Variability across and within fish species in energy utilization efficiency</td>
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<td></td>
<td>Dr. Johan Schrama</td>
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<tr>
<td>16:45</td>
<td>Adipocyte response to nutrient deprivation in Atlantic salmon is influenced by its endogenous lipid composition</td>
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<td>Dr. Marta Bou</td>
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<tr>
<td>17:00</td>
<td>Optimum selenium, manganese and copper levels in diets high in plant based feedstuffs for gilthead seabream (Sparus aurata) fingerlings</td>
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<td>Mr. David Dominguez</td>
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<tr>
<td>17:15</td>
<td>Effects of different dietary selenium sources on antioxidant status and oxidative stress-related parameters in rainbow trout juveniles fed plant ingredients</td>
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<td>Dr. Stephanie Fontagné-Dicharry</td>
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<td>17:30</td>
<td>Assessment of twelve dietary macro and trace minerals on growth and tissue composition of black tiger prawns, Penaeus monodon, using a Plackett-Burman screening design</td>
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<td>Dr. Ha Truong</td>
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<td>17:45</td>
<td>Using an in vitro model of the fish liver to study the role of phosphorus availability on cell proliferation, cell metabolism, and intracellular trace metal homeostasis.</td>
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<td>Dr. Matteo Minghetti</td>
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18:00 – 20:00  Mini Symposium 1  
“Modelling approaches in aquafeeds evaluation” Organized by Sparos

20:00  Daily program ends
08:30 – 10:30  
**Session 3.1: Feed Ingredients & Technology I**  
*Chairs: Genevieve Corraze and Shen Shi Shiau*

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<tr>
<th>Time</th>
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<tr>
<td>08.30</td>
<td>Recent developments in aquaculture feeds - an industry perspective</td>
<td>Dr. Alex Obach</td>
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<tr>
<td>09.00</td>
<td>Shooting ourselves in the “food”: the unintended consequences of demonising fishmeal and fish oil</td>
<td>Prof. Giovanni M. Turchini</td>
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<tr>
<td>09.15</td>
<td>Omega-3 Canola Oil effectively replaces fish oil as a dietary source of docosahexaenoic acid (DHA) in feed for Atlantic salmon in freshwater and seawater</td>
<td>Prof. Bente Ruyter</td>
</tr>
<tr>
<td>09.30</td>
<td>Heterologous synthesis of omega-3 long chain polyunsaturated fatty acids in transgenic plants: a terrestrial source of fish oils</td>
<td>Prof. Johnathan Napier</td>
</tr>
<tr>
<td>09.45</td>
<td>An alternative source of long chain omega-3 fatty acids from novel canola oil for salmonid farming. Feeding trial report</td>
<td>Dr. Diliara Iassonova</td>
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<tr>
<td>10.00</td>
<td>Novel feed resources from blue and green renewable biomass</td>
<td>Prof. Margareth Øverland</td>
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<td>10.15</td>
<td>Are terrestrial plants the solution to sustainable aquafeeds?</td>
<td>Dr. Karl Shearer</td>
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10:30 – 11:15  
**Coffee Break**

11:15 – 12:45  
**Session 3.2: Feed Ingredients & Technology II**  
*Chairs: Bente Ruyter and Francisco Javier Moyano*

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<tr>
<th>Time</th>
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<tr>
<td>11.15</td>
<td>Effects of removal of three proteinaceous antinutrients from a soybean variety and level of heat treatment on nutritional value, gut microbiota and capacity for induction of enteritis in Atlantic salmon (Salmo salar, L)</td>
<td>Prof. Åshild Krogdahl</td>
</tr>
<tr>
<td>11.30</td>
<td>The utilisation of soy protein in aquafeeds by gold-spot grouper <em>Epinephelus coioides</em></td>
<td>Dr. Igor Pirozzi</td>
</tr>
<tr>
<td>11.45</td>
<td>Aquatic macrophytes and almond oil-cake: Potential source of protein for <em>Labeo rohita</em></td>
<td>Prof. Jaigopal Sharma</td>
</tr>
<tr>
<td>12.00</td>
<td>Effects of α-ketoglutarate supplementation in low-phosphorous diets on growth performance, phosphorus metabolism and NaPi-II mRNA expression of songpu mirror carp</td>
<td>Dr. Qiyou Xu</td>
</tr>
<tr>
<td>12.15</td>
<td>Feed resources in Norwegian salmon farming in 2016</td>
<td>Dr. Turid Synnøve Aas</td>
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**12.30** Effects of low fishmeal diets on growth and gastro-intestinal luminal and digestive conditions of European sea bass (Dicentrarchus labrax L.) juveniles  
Dr. Luca Parma

**12:45 – 14:15** Buffet-Lunch

**14:15 – 15:45** Session 3.3: Feed Ingredients & Technology III  
*Chairs: Giovanni Turchini and Lidia Robaina*

- **14.15** Modeling the bioaccessibility of nutrients in the gut of the gilthead seabream (Sparus aurata) using the response surface methodology: constraints and possibilities  
  Prof. Francisco J. Moyano
- **14.30** Comparative study on the apparent availability of zinc, selenium and manganese as inorganic metal salts or chelated sources in plant-based feeds for Atlantic salmon (Salmo salar) in seawater  
  Ms. Marta Silva
- **14.45** Poultry meal in red claw crayfish (Cherax quadricarinatus) diets in comparison to fish meal and vegetable protein mix  
  Prof. Orhan Tufan Eroldogan
- **15.00** The effect of poultry protein concentrate and phosphorus supplementation on growth, digestibility and nutrient retention efficiency in barramundi Lates calcarifer  
  Dr. Michael Salini
- **15.15** Tailoring of insects as aquafeed ingredients  
  Dr. Nina S Liland
- **15.30** The oil fraction and partially defatted meal of black soldier fly larvae (Hermetia illucens) affect differently growth performance, feed efficiency, nutrient deposition, blood glucose and lipid digestibility of rainbow trout (Oncorhynchus mykiss)  
  Dr. André Dumas

**15:45 – 16:30** Coffee Break

### Poster Session 3.2: Feed Ingredients & Technology II

*Chairs: Douglas Tocher and Ana Farias*

Presentations P.3.35 – P.3.71

### 16:30 – 18:00** Session 3.4: Feed Ingredients & Technology IV

*Chairs: Elisabeth Cruz and Ashild Krogdahl*

- **16.30** Health and flesh quality of Atlantic salmon fed a modern low fishmeal diet supplemented with Antarctic krill, Euphausia superba  
  Prof. Turid Mørkøre
- **16.45** A microalgal oil containing EPA+DHA can be an effective source of omega 3 for Atlantic salmon post-smolts  
  Dr. Ester Santigosa
- **17.00** Different physiological roles of insulin receptors in mediating nutrient metabolism in zebrafish  
  Prof. Dong Han
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<tr>
<td>17.15</td>
<td>The potential applications of stable isotopes in experimental nutrition studies</td>
<td>Mr. Siqin Gerile</td>
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<td>17.30</td>
<td>Impact of dietary ingredient composition on fecal characteristics, nutrient availability and waste production in common carp reared in RAS</td>
<td>Dr. Antony Jesu Prabhu</td>
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<tr>
<td>17.45</td>
<td>Fatty acid metabolism and performance in Atlantic salmon as affected by dietary oils and seasonality: results from a long-term, on-farm growth trial</td>
<td>Mr. Thomas Mock</td>
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**18:00 – 19:00**

**Mini Symposium 2**


**19:00**

Daily program ends
**ISFN 2018 SCIENTIFIC PROGRAM**

**JUNE 6TH, WEDNESDAY**

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<tr>
<th>Time</th>
<th>Session 4: Early Nutritional Interventions</th>
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<tr>
<td>08:30</td>
<td><strong>Chairs:</strong> Kangsen Mai and Fátima Linares</td>
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<tr>
<td>08.30</td>
<td>Nutritional programming in gilthead sea bream (<em>Sparus aurata</em>): Improvements towards better utilisation of low n-3 LC-PUFA diets</td>
<td>Mr. Serhat Turkmen</td>
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<tr>
<td>08.45</td>
<td>Dietary influence of omega-3 fatty acids on performance and lipid metabolism in three Atlantic salmon genetic groups selected by divergent Δ-6 desaturase capacity</td>
<td>Dr. Esmail Lutfi Royo</td>
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<tr>
<td>09.00</td>
<td>Selected strain of gibel carp shows better utilization on dietary carbohydrate</td>
<td>Prof. Shouqi’ Xie</td>
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<tr>
<td>09.15</td>
<td>Transcriptomic and epigenetic effects of high dietary arachidonic acid in the next generation</td>
<td>Ms. Anne-Catrin Adam</td>
</tr>
<tr>
<td>09.30</td>
<td>Molecular and functional characterisation of two elovl4 elongases involved in the biosynthesis of very long-chain (&gt; C24) polyunsaturated fatty acids in black seabream <em>Acanthopagrus schlegeli</em></td>
<td>Dr. Min Jin</td>
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<tr>
<td>09.45</td>
<td>Vitamin E stimulates the secretion of gonadotropin hormone of broodstock tongue sole (<em>Cynoglossus semilaevis</em>): Evidences from <em>in vitro</em> and <em>in vivo</em> studies</td>
<td>Dr. Weifang Wang</td>
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<tr>
<td>10.00</td>
<td>Effect of rearing temperature on the digestive function in Cobia fry</td>
<td>Prof. Manuel Yúfera</td>
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<tr>
<td>10.15</td>
<td>Effect of dietary inorganic and organic selenium supplementation on reproduction and egg quality in rainbow trout (<em>Oncorhynchus mykiss</em>)</td>
<td>Ms. Pauline Wischhusen</td>
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**10:30 – 11:00Coffee Break**

**Poster Session 4: Early Nutritional Interventions**
*Chairs:* Deborah Fracalossi and Javier Roo
Presentations P.4.01 – P.4.25

**Poster Session 5: Integrative Tools in Aquaculture**
*Chairs:* Ron Hardy and Manuel Yúfera
Presentations P.5.01 – P.5.23

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<tr>
<th>Time</th>
<th>Session 5: Integrative Tools in Aquaculture Nutrition</th>
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<tr>
<td>11:00</td>
<td><strong>Chairs:</strong> Shouqi Xie and Jaume Pérez-Sánchez</td>
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<tr>
<td>11.00</td>
<td>Integrative omics approaches in gilthead sea bream (<em>Sparus aurata</em>): from nutrients to metabolites</td>
<td>Prof. Jaume Pérez-Sánchez</td>
</tr>
<tr>
<td>11.15</td>
<td>The effect of season on the gilthead seabream liver metabolome: from FT-IR fingerprints to interpretable metabolic profiles</td>
<td>Dr. Tomé Santos Silva</td>
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</tbody>
</table>
11.30 The circadian transcriptome of marine fish (*Sparus aurata*) larvae: synchrony matters
   Dr. Erick Perera

11.45 EPA and LA affect adipogenesis and lipid metabolism-related genes expression in *in vitro* and *in vivo* models of rainbow trout (*Oncorhynchus mykiss*)
   Dr. Isabel Navarro

12.00 Mir-34 and sirt1/foxo1: insights of hepatic glycolipid metabolism in *Megalobrama amblycephala*
   Dr. Linghong Miao

12.15 Ex vivo characterization of methionine absorption in the intestinal tract of rainbow trout (*Oncorhynchus mykiss*) using 14C radiolabeled methionine flux and gene expression
   Ms. Van To

12.30 The study of the fish microbiome: the story behind the results
   Dr. Karina Gajardo

12.45 Precision cut liver slice culture as a platform for studying lipid metabolism in Atlantic salmon
   Mr. Thomas Harvey

13.00 Effect of low fish meal and fish oil diet on growth performance, hepatic fatty acid composition and *fads2* expression of juvenile gilthead sea bream (*Sparus aurata*) from nutritional programmed broodstock
   Mr. Hanlin Xu

13.15 Integrative 1H-NMR metabolomic investigation of the effect of alternative diets on rainbow trout plasma
   Mr. Simon Roques

13.30 Empowering health and defenses in Atlantic salmon with functional supplements: a comparative analysis between pre- and probiotic effects on intestinal function, metabolism and immune response
   Dr. Ana Teresa Gonçalves

13:45 Daily program ends

Wednesday Afternoon: Different social activities and tours available to jointly discover the Island.
ISFNF 2018 SCIENTIFIC PROGRAM

JUNE 7TH, THURSDAY

08:30 – 10:30  Session 6.1: Nutrition and Health I
Chairs: Rune Wagboo and Silvia Torrecillas

08.30  Status, challenges and advances in global aquaculture
       George W. Chamberlain

09.00  A possible connection between oxidative stress and production related diseases in Atlantic salmon
       (Salmo salar L)
       Prof. Kristin Hamre

09.15  Dietary prebiotics and phytogenics in low fish meal and fish oil based diets for European seabass
       (Dicentrarchus labrax): effects on stress resistance
       Prof. Daniel Montero

09.30  Effect of a specific composition of short- and medium- chain fatty acid 1-Monoglycerides on growth
       performances and gut microbiota of gilthead sea bream (Sparus aurata)
       Ms. Emi Gliozheni

09.45  Autochthonous intestine bacteria used as microbial feed additives confer some protection to
       Senegalese sole with the infectious agent Photobacterium damselae sp. piscicida
       Dr. Sónia Batista

10.00  Recovery effect of dietary β-glucan on the hypersaline stress induced immunity damage and gut
       microbiota in Nile tilapia
       Prof. Erchao Li

10.15  Bidirectional mechanism of astaxanthin in growth performance, immune capacity, gut morphology
       and intestinal microbiota mediation of golden pompano (Trachinotus ovatus)
       Dr. Jin Niu

10:30 – 11:15  Coffee Break

Poster Session 6: Nutrition and Health
Chairs: Delbert Gatlin and Enric Gisbert
Presentations P.6.01 – P.6.48

11:15 – 12:45  Session 6.2: Nutrition and Health II
Chair: Kristin Hamre and Carlos Martinez-Palacios

11.15  Effects of glycandin and β-conglycinin on growth performance, digestion and intestinal morphology in
       juvenile Chinese mitten crabs (Eriocheir sinensis)
       Dr. Xiaodan Wang

11.30  Intestinal health and function of Atlantic salmon fed feed ingredients of insect origin
       Mr. Yanxian Li

11.45  Environmental concentrations of antibiotics impair zebrafish gut health
       Prof. Meiling Zhang
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12.00  Modelling responses to virus and functional amino acids in immune cells from diploid and triploid Atlantic salmon reared at different temperature  
Dr. Sofie Charlotte Remø

12.15  Dietary amino acids inclusion in fishmeal-free diet for gilthead seabream (Sparus aurata) juveniles induces opposite effects depending on feeding time.  
Mr. Lourenço Ramon Pinto

12.30  Growth performance, skin strength and consequent infestation of sea lice Caligus rogercresseyi on Atlantic salmon Salmo salar fed diets containing AVAILA®ZN zinc amino acid complex  
Dr. Mihai Sun

12:45 – 14:15  Buffet-Lunch

14:15 – 15:45  Session 6.3: Nutrition and Health III  
Chair: Alessio Bonaldo and Daniel Montero

14.15  The activation of farnesoid X receptor inhibits inflammation via antagonizing NF-κB in large yellow croaker (Larimichthys crocea sp.)  
Prof. Qinghui Ai

14.30  The effect of mycotoxin contaminated feed on performance and health status of Litopenaeus vannamei  
Dr. Astrid Koppenol

14.45  Non-integrated nutrition promotes hepatic inflammation and apoptosis involving MAPK signaling pathway in largemouth bass (Micropterus salmoides) and the clinical function of bile acids  
Prof. Min Xue

15.00  Plant sterols and cholesterol in the diet of Atlantic salmon (Salmo salar L.)  
Dr. Nini H. Sissener

15.15  Dietary tryptophan deficiency and supplementation compromises European seabass immune status, inflammatory mechanisms and disease resistance  
Ms. Marina Machado

15.30  Evaluation of the optimum dietary γ-aminobutyric acid (GABA) level in juvenile Nile tilapia, Oreochromis niloticus  
Prof. Sungchul C. Bai

15:45 – 16:30  Coffee Break

Poster Session 7: Functional Foods in Aquaculture  
Chairs: Rune Wagboo and Rina Chakrabarti  
Presentations P.7.01 – P.7.30

16:30 – 17:30  Session 7: Functional Foods in Aquaculture  
Chair: Delbert Gatlin and Mónica Betancor

16.30  Dietary use of mannan oligosaccharides in greater amberjack juveniles: effects on growth performance, immune gene expression and disease resistance against Neobenedenia girellae  
Mr. Alvaro Fernandez-Montero
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| 16.45 | Effects of α-lipoic acid on growth performance, body composition, antioxidant status and lipid catabolism of juvenile Chinese mitten crab *Eriocheir sinensis* fed two lipid levels  
Prof. Liqiao Chen |
| 17.00 | The effect of dietary lipoic acid supplementation on growth, survival and feeding efficiency of *Chirostoma estor* larvae  
Prof. Carlos Martinez-Palacios |
| 17.15 | Benefits of spray-dried plasma (SDP) dietary inclusion on skin and epidermal mucus of a fish model marine species: histological, transcriptomic and proteomic approaches  
Mr. Borja Ordóñez-Grande |

**17:30 – 18:15**  
**Mini Symposium 3**  
“Functional feed additives: add more to your aquafeed!”. Organized by Nutriad.

**18:15**  
Closing Ceremony

**20:00**  
Departure for Gala Dinner from Parque Santa Catalina
**June 4th, Monday**

**10:30 – 11:15**  
**Poster Session 1: Nutrition and Product Quality**  
*Chairs: Genevieve Corraze and Orhan Tufan Eroldogan*

Presentations P.1.01 – P.1.16

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<tr>
<td>P.1.01</td>
<td>On farm seasonal feed utilisation and proximate composition of post-smolt Atlantic salmon (<em>Salmo salar</em>)</td>
<td>Mr. Matthew K. Jago</td>
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<td>P.1.02</td>
<td>Growth performance, fatty acid profile and meat quality of large Nile tilapia &quot;Oreochromis niloticus&quot; fed diets supplemented with linseed oil and raised under suboptimal temperature</td>
<td>Dr. Wilson Massamitu Furuya</td>
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<td>P.1.03</td>
<td>Reducing long chain omega 3 polyunsaturated fatty acids in formulated diets for harvest size Yellowtail Kingfish (<em>Seriola lalandi</em>) – is there a trade-off between levels of omega-3 and omega-9 in some tissues?</td>
<td>Ms. Samantha Chown</td>
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<td>P.1.04</td>
<td>Nutritional evaluation of seafood available to consumers in the UK</td>
<td>Dr. Matthew Sprague</td>
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<td>P.1.06</td>
<td>Whole body proximate, amino acid, fatty acid and elemental composition of Atlantic salmon (<em>Salmo salar</em> L.) at harvest size from commercial farming in Norway 2017.</td>
<td>Mr. Torbjørn Åsgård</td>
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<td>P.1.07</td>
<td>Growth performance and nutrient utilisation of Senegalese sole fed vegetable oils in plant protein-rich diets from juvenile to market size</td>
<td>Ms. Ana Basto</td>
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<td>P.1.08</td>
<td>Nutritional effects on dark fillet spots of Atlantic salmon (<em>Salmo salar</em> L.)</td>
<td>Prof. Turid Mørkøre</td>
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<td>P.1.09</td>
<td>Formulated pacific bluefin tuna diets improve flesh quality and increase shelf life of sashimi-grade product</td>
<td>Dr. Alejandro Buentello</td>
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<tr>
<td>P.1.10</td>
<td>Effects of storage conditions on peroxide values of commercial fish oils</td>
<td>Mr. Kutsal Gamsiz</td>
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<tr>
<td>P.1.11</td>
<td>Effect of modified atmosphere packaging on microbiological and physico-chemical properties of microencapsulated diet</td>
<td>Ms. Supalug Kattakdad</td>
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<tr>
<td>P.1.12</td>
<td>Assessment of different protein/lipid ratios in diets for sea urchin, <em>Paracentrotus lividus</em></td>
<td>Mr. Luis Baião</td>
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<td>Effects of dietary components on absorption and retention of astaxanthin in Atlantic salmon (<em>Salmo salar</em> L.)</td>
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<td>Sensory quality of Atlantic salmon (<em>S. salar</em>) fed no fish meal–no fish oil diets</td>
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P.1.15 Fish nutrition role in sensory quality traits of final products and consumer preferences

Dr. Juan Calanche

P.1.16 Effects of dietary protein level and non-protein energy source on muscle growth mechanisms in rainbow trout (Oncorhynchus mykiss) juveniles

Dr. Hélène Alami-Durante

10:30 – 11:15 Poster Session 2: Nutritional Requirements

Chairs: Shi-Yen Shiau and Grethe Rosenlund

Presentations P.2.01 – P.2.47

P.2.01 Regulation of miR-33a and cholesterol metabolism related gene expression in rainbow trout (Oncorhynchus mykiss): in vivo and in vitro approaches

Dr. Sandrine Skiba-Cassy

P.2.02 The Effects of Soy Lecithin-Enriched Artemia on Growth and Survival of the Early Stages of Green Tiger Shrimp (Penaeus semisulcatus)

Dr. H. Asuman Yilmaz

P.2.03 CHARACTERIZATION OF 3-HYDROXY-3-METHYLGLUTARYL (HMG) COA REDUCTASE AND ITS REGULATION BY DIETARY SOYBEAN MEAL AND CHOLESTEROL IN GIANT GROUPER

Dr. Yu-Hung Lin

P.2.04 Lipophagy is essential for lipid metabolism in fish

Prof. Zhen-Yu Du

P.2.05 A comparative approach improving efficiency of finishing period in gilthead sea bream (Sparus aurata) and european sea bass (Dicentrarchus labrax)

Prof. Orhan Tufan Eroldogan

P.2.06 Growth and stress axis responses to dietary cholesterol in Nile tilapia Oreochromis niloticus in brackish water

Prof. Erchao Li

P.2.07 Effects of different dietary levels EPA + DHA on egg quality of greater amberjack (Seriola dumerili).

Ms. Samira Sarih

P.2.08 Effect of dietary ARA/EPA/DHA ratios on gilthead sea bream (Sparus aurata) growth performance and hepatic intermediary metabolism

Mr. Rui Magalhães

P.2.09 Essential fatty acid metabolism and requirements of the cleaner fish, ballan wrasse Labrus bergylta: Defining pathways of long-chain polyunsaturated fatty acid biosynthesis

Dr. Oscar Monroig

P.2.10 Practical dietary long-chain omega-3 polyunsaturated fatty acid requirements for large Yellowtail Kingfish (Seriola lalandi)

Ms. Samantha Chown

P.2.11 Mixes of plant oils for Nile tilapia at optimal and cold suboptimal temperature

Prof. Débora Machado Fracalossi

P.2.12 Dietary DHA/EPA ratio affected tissue fatty acid profiles, antioxidant capacity, hematological characteristics and expression of lipid-related genes but not growth in juvenile black seabream (Acanthopagrus schlegelii)

Dr. Min Jin
P.2.13 Saturated fatty acids in diets are better utilized by juvenile tiger puffer Takifugu rubripes than n-6 fatty acids
Dr. Houguo Xu

P.2.14 Elucidating the biosynthesis of long-chain polyunsaturated fatty acid in a freshwater fish species, Clarias gariepinus
Ms. Angela Oboh

P.2.15 Effects of dietary nucleotide on growth and fatty acid composition of juvenile rainbow trout Oncorhynchus mykiss
Dr. Yutaka Haga

P.2.16 The nutrient metabolic characteristics of a low-carnitine zebrafish model
Prof. Zhen-Yu Du

P.2.17 Respiratory metabolism of juvenile spiny lobster (Sagmariasus verreauxi) under different feeding conditions
Mr. Shuangyao Wang

P.2.18 Modelling protein, amino acid and energy requirements of tiger grouper Epinephelus fuscoguttatus
Dr. Igor Pirozzi

P.2.19 Effects of dietary protein and lipid levels on growth performance, feed utilization and body composition of tahuina larva (Cichlasoma trimaculatum, Amphilophus trimaculatus)
Dr. Francisco Javier Toledo Solís

P.2.20 Effect of different dietary methionine and lysine supplementation on growth performance in practical diets for adult Common Carp (Cyprinus carpio)
Dr. Juyun He

P.2.21 Long-chain polyunsaturated fatty acid biosynthesis in Japanese eel Anguilla japonica: Cloning and functional characterisation of fatty acid desaturase 1 (Fads1)
Dr. Naoki Kabeya

P.2.22 Feeding of juvenile cobia Rachycentron canadum: evaluation of practical feeds, comparison of commercial fish meal replacers, and estimation of essential amino acids requirements
Mr. Thiago Raggi

P.2.23 Metabolic response to dietary taurine levels in European sea bass (Dicentrarchus labrax, L) juveniles
Ms. Nicole M. Pires

P.2.24 Supplementation of essential amino acids as a strategy to reduce dietary protein levels for Jian carp, Cyprinus carpio var. Jian
Dr. Mingchun Ren

P.2.25 Dietary arginine levels affect the synthesis from glutamic acid to arginine in juvenile hybrid grouper (Epinephelus fuscoguttatus ♀× Epinephelus lanceolatus ♂)
Dr. Wu Xiaoyi

P.2.26 Effects of dietary lysine levels on growth, feed utilization and related gene expression of juvenile hybrid grouper (Epinephelus fuscoguttatus ♀× Epinephelus lanceolatus ♂)
Dr. Gao Yujie

P.2.27 Is dietary taurine supplementation beneficial for Senegalese sole juveniles?
Dr. Cláudia Aragão

P.2.28 Response of Nile tilapia to decreasing levels of dietary protein balanced for essential amino acids
Dr. Karthik Masagounder
Supplementation of dl-methionyl-methionine reduces the dependency on fishmeal in diets for juvenile *Litopenaeus vannamei*

**Dr. Karthik Masagounder**

Estimating lysine and phosphorus requirements of rainbow trout and nile tilapia as a function of body weight using a factorial nutrient requirement

**Ms. Fatemeh (Neda) Nemati Shizari**

Importance of different CA/P ratios in pikeperch (*Sander lucioperca*) during the early life stage

**Ms. Najlae El Kertaoui**

Effect of inclusion of krill meal in on-growing diets on growth, survival, nutritional utilization and fry quality of seabream

**Dr. Reda Saleh**

Copper levels in diets high in vegetable ingredients for gilthead seabream (*Sparus aurata*) fingerlings

**Mr. David Dominguez**

Optimum manganese levels in diets high in vegetable ingredients for gilthead seabream (*Sparus aurata*) fingerlings

**Mr. David Dominguez**

Optimum selenium levels in diets high in vegetable ingredients for gilthead seabream (*Sparus aurata*) fingerlings

**Mr. Zakarya Sehnine**

Phosphorus: problems and solutions

**Dr. Shozo Sugiura**

Vitamin K nutritional requirements, functions and underlying mechanisms in fish: new insights from a 6 year integrative research effort.

**Dr. Ignacio Fernandez**

Choline supplementation improves growth performance of juvenile yellowtail kingfish (*Seriola lalandi*)

**Ms. Angela Liu**

Effects of glucose administration on glucose and lipid metabolism in two strains of gibel carp (*Carassius gibelio*)

**Dr. Junyan Jin**

Seasonal variations in kinetics parameters of digestive proteases in freshwater fish may help to maximize their efficiency in protein digestion

**Dr. Eugene Rogozhin**

Influence of actual stomach pH values and water temperature on the activity of pepsin in stomach of rainbow trout (*Oncorhynchus mykiss*)

**Ms. Olga Golovaneva**

Development of digestive enzyme activity in larvae of *Sphoeroides annulatus* feeding with different protocols

**Dr. Mario Galaviz**

The physiological and metabolic differences between visceral and subcutaneous adipose tissues in Nile tilapia (*Oreochromis niloticus*)

**Prof. Zhen-Yu Du**

FEEDNETICS: a tool to assist fish farms to plan feeding strategies and manage feed stocks

**Mr. Filipe Soares**

Recent advances in Totoaba, *Totoaba macdonaldi* nutrition

**Dr. Lus M López**
P.2.46 WorldFish research in fish feeds and nutrition  
Dr. Rodrigue Yossa

P.2.47 Systemic metabolic strategies of grass carp in response to inappropriate carbohydrate or fat diets  
Ms. Xu-Fang Liang

June 5th, Tuesday

10:30 – 11:15 Poster Session 3.1: Feed Ingredients & Technology I  
Chairs: Stephanie Fontagné-Dicharry and Oscar Monroig  
Presentations P.3.01 – P.3.34

P.3.01 In vitro assessment of inmune and inflammatory response in gilthead sea bream (Sparus aurata, L.) intestine  
Prof. Miguel Jover-Cerdá

P.3.02 Pseudo-stem by-product from Canarian banana crop (Musa acuminata colla): preliminary study on the inclusion for tilapia diets.  
Ms. Sara Ramírez-Bolaños

P.3.03 Assessment of protein and phosphorus bioaccessibility of selected lupin species and varieties by simulating the gastrointestinal digestion of rainbow trout (Oncorhynchus mykiss)  
Dr. Adrian Hernandez

P.3.04 European marketable lupin varieties as potential protein-rich ingredients in aquaculture  
Ms. Sara Magalhães

P.3.05 Review of recent research demonstrating that low-gossypol cottonseed protein will extend the use of fish meal in the diets of several aquaculture species  
Mr. Tom Wedegaertner

P.3.06 The integrative response of Atlantic salmon to fish meal replacement: from nutrigenomics to physiology  
Dr. Ana Teresa Gonçalves

P.3.07 Brewers by-products as alternative ingredients for partial substitution of fish meal in aquaculture feed  
Mr. David San Martin

P.3.08 Effects on the growth and blood serum parameters of plant protein concentrates on the diets for rainbow trout (Oncorhynchus mykiss) fingerlings.  
Dr. L. Héctor Hernández Hernández

P.3.10 Apparent digestibility coefficients of protein feedstuffs for Nile tilapia (Oreochromis niloticus L.) under intensive farming conditions  
Prof. Luiz Edivaldo Pezzato

P.3.11 Potential for using corn ddgs in European catfish (Silurus glanis) diets  
Mr. Norbert Révész

P.3.12 Evaluation of proteases and carbohydrases in tilapia diets  
Ms. Alexandra Amorocho

P.3.13 Paecilomyces variotii as a replacement for soy protein in salmonid diets, a suitability study  
Ms. Alexandra Leeper
P.3.14 High incorporation of plant protein in the diet of Nile tilapia, *Oreochromis niloticus* using exogenous protease  
*Dr. Mohamed Hassaan*

P.3.15 The effect of non-starch polysaccharide composition and enzyme supplementation on growth performance and nutrient digestibility in Nile tilapia  
*Mr. Roel Maas*

P.3.16 Better performance, nutrient digestibility and digestive enzyme production in Yellow catfish fed fishmeal free diets supplemented with a protease complex  
*Dr. M A Kabir Chowdhury*

P.3.17 Fishmeal replacement with plant and animal proteins and supplementation of exogenous phytase and protease in diets for juvenile cobia (*Rachycentron canadum*)  
*Mr. Rafael Coelho*

P.3.18 The effect of exogenous enzymes in the diet of Common carp (*C. carpio*) on growth performance and feed utilization  
*Mr. Wouter Meeus*

P.3.19 Fishmeal replacement by feather meal and feather meal hydrolysate in rainbow trout (*O. mykiss*)  
*Mr. Wouter Meeus*

P.3.20 Partial replacement of fishmeal protein by poultry by-product meal protein and soybean meal protein in diets for juvenile hybrid grouper (*Epinephelus fuscoguttatus♀ × Epinephelus lanceolatus♂*)  
*Dr. Wu Xiaoyi*

P.3.21 Apparent nutrient digestibility of PAPs from poultry rendering and insect meals in rainbow trout (*O. mykiss*) and European seabass (*D. labrax*)  
*Dr. Gloriana Cardinaletti*

P.3.22 Dietary impacts of sulphuric acid extracted fish bone compounds on tissue astaxanthin deposition and astaxanthin utilization in Atlantic salmon (*Salmo salar*)  
*Dr. Sissel Albrektsen*

P.3.23 Evaluation of the effects of tuna fish hydrolysate inclusion in diets for Pacific white shrimp (*Litopenaeus vannamei*) reared in floating cages under commercial conditions  
*Dr. Kurt Servin*

P.3.24 Effect of partial wild derived fish meal replacement on bile acid production and liver structure in Yellowtail Kingfish, *Seriola lalandi*  
*Mr. Benjamin H. Crowe*

P.3.25 Graded levels of fish protein hydrolysates affect growth, free amino acid concentrations, and protein metabolism related gene expression in juvenile turbot (*Scophthalmus maximus* L.)  
*Dr. Yuliang Wei*

P.3.26 Fish meal quality and rapid digestibility assessment methods: Towards using less, but using it better  
*Mrs. Jessica Conlan*

P.3.27 Potential of aquaculture by-products for fish meal and fish oil production in Turkey  
*Mr. Kutsal Gamsiz*

P.3.28 Evaluation of defatted krill meal as partial and total fishmeal replacement in diets for gilthead seabream (*Sparus aurata*) juveniles  
*Mrs. Sara Moutinho*
In vitro protein digestion of hydrolyzed and fermented soy protein concentrates with species-specific digestive enzymes of whiteleg shrimp

Dr. Patricia Sugui

In vitro bacterial and viral response in head kidney leukocytes of Atlantic salmon (Salmo salar) fed dietary insects meal

Ms. Oda Stenberg

Invertebrate meals as a sustainable aquafeed component

Dr. Alex Wan

Feeding Tenebrio meal during larval stage of Nile Tilapia improved fish productive performance and feed utilization

Dr. Priscila Rosa

Influence of insect-based diets on growth performance and body composition in fresh- and sea-water phase Atlantic salmon

Dr. Ikram Belghit

Free, dipeptide and tripeptide forms of lysine and leucine affected the growth, free amino acid concentrations, and protein metabolism-related gene expression of juvenile turbot (Scophthalmus maximus L.)

Prof. Mengqing Liang

Dietary N-carbamoylglutamate supplementation enhanced the growth and the endogenous synthesis of arginine of hybrid sturgeon juveniles under dietary arginine deficiency

Dr. Liansheng Wang

Effect of taurine supplementation to non or low fishmeal diet on growth, intestinal morphology and cytokines gene expression of juvenile red sea bream, Pagrus major

Ms. Fengyu Li

Growth performance and metabolism of juvenile European seabass (Dicentrarchus labrax) fed diets supplemented with arginine, and two lipids levels

Prof. Lilian Dena dos Santos

Does dietary fatty acid profile affect performance and intestinal lipid-related genes expression in gilthead sea bream?

Mr. Albert Sánchez-Moya

Omega-3 fatty acid bioconversion in large Atlantic salmon via the manipulation of dietary short-chain to long-chain omega-3 fatty acid ratios

Mr. Thomas Mock

Regulation of growth, fatty acid profiles, antioxidant capacity and expression of lipid related genes by different dietary lipid in juvenile swimming crab, Portunus trituberculatus

Ms. Peng Sun

Effects of dietary fish oil replaced by soybean oil on growth, biochemical and antioxidant responses, fatty acid composition and related gene expression of inflammation of juvenile large yellow croaker (Larimichthys crocea)

Mr. Xueshan Li
P.3.43 Efficacy of novel long chain omega-3 canola oil to replace fish oil in practical diets of Pacific white shrimp
Dr. Donald Davis

P.3.44 Zebrafish as model animal for the evaluation of health effects of seaweeds
Dr. Alexander Jaramillo-Torres

P.3.45 Estimation of Gracilaria verrucosa, Enteromorpha prolifera, algae residue and fungi residue for juvenile tiger puffer (Takifugu rubripes)
Prof. Mengqing Liang

P.3.46 Evaluation of microalgae biomass as feed ingredient for aquafeeds: analysis of toxicity in SAF-1 and DLEC fish cell lines and heavy metal content
Dr. Virginia Casas Arrojo

P.3.47 Evaluation of microalgae biomass as feed ingredient for aquafeeds: chemical characterization
Dr. Juan Luis Gómez Pinchetti

P.3.48 Evaluation of microalgae biomass as feed ingredient for aquafeeds: In vitro protein hydrolysis by digestive proteases of marine fish
Dr. Antonio Jesús Vizcaíno

P.3.49 Evaluation of microalgae biomass as feed ingredient for aquafeeds: cell wall disruption with exogenous enzymes
Dr. Juan Luis Gómez-Pinchetti

P.3.50 Assessing algal biomasses as potential ingredients in microdiets for Senegalese sole (Solea senegalensis) larvae
Mr. Wilson Pinto

P.3.51 Replacement of fish oil with a mixture of microalgae meal (Schizochytrium limacinum and Nannochloropsis oceanica) in diets of rainbow trout (Oncorhynchus mykiss) post-smolts: Implication on growth performance, health and product quality.
Dr. Edison Serrano

P.3.52 Effects of dietary fish oil replacement by microalgae, Schizochytrium sp. on growth performance, body composition and fatty acid profile of juvenile red seabream, Pagrus major
Mr. Taekyoung Seong

P.3.54 Effects of glucose-glycine melanoidins on apparent digestibility coefficients of minerals in the rainbow trout Oncorhynchus mykiss
Dr. Lorenzo Márquez

P.3.55 Efficacy of Availa®Zn And Availa®Se for White shrimp (Litopenaeus vannamei)
Dr. Mihai Sun

P.3.57 Impact of ionic composition in the intestinal fluid of salmonids and amino acids on solubility of dietary zinc in vitro
Dr. Antony Jesu Prabhu

P.3.58 Dynamics of the digestion of phosphorus in Rainbow Trout (Oncorhynchus mykiss) with emphasis on phytate and bone phosphorus
Ms. Flavia Mota Damasceno

P.3.59 Effect of bile salt supplementation on the fat digestibility of non-starch polysaccharide containing diets in rainbow trout (Oncorhynchus mykiss)
Mr. Thomas Staessen
Does a high-starch diet affect the muscular and hepatic metabolome in barramundi (*Lates calcarifer*)?
*Dr. Mariana Palma*

The effects of amylose and amylopectin levels on glucose metabolism of pacu (*Piaractus mesopotamicus*). 
*Dr. Leonardo Susumu Takahashi*

Effects of taste components on growth performance and digestive function in Red seabream (*Pagrus major*) fed free fishmeal soybean concentrate-based diet
*Ms. Siriporn Tola*

Effects of dietary astaxanthin on growth performance and lipid accumulation of juvenile tiger puffer (*Takifugu rubripes*). 
*Dr. Houguo Xu*

Effect of automatic feeding system in productivity of White shrimp (*Litopenaeus vannamei*) farmed in semi-extensive ponds
*Mr. Juan Carlos Valle*

Mechanism on feed intake regulation of *Lateolabrax japonicus* when fishmeal was replaced by plant protein
*Dr. Xiaofang Liang*

Impact of dissolved oxygen level on feed intake and growth performances of tilapia reared in tanks
*Ms. Delphine Weissman*

Hardness and disintegration stability of extruded feed affects fish performance
*Dr. André S Bogevik*

Effects of an unprecedented summer heatwave on the growth performance, flesh colour and plasma biochemistry of marine cage-farmed Atlantic salmon (*Salmo salar*)
*Dr. Nick Wade*

Integrated multitrophic aquaculture system (IMTA) for European seabass and sea urchin production versus monoproduction of European seabass 
*Mr. Rui Magalhães*

Nutritional value of *Hermetia illucens* and *Tenebrio molitor* partially defatted and non-defatted meals for European seabass: in vivo apparent nutrient digestibility
*Ms. Ana Basto*

Evaluation of sacha inchi oil as alternative lipid resource in diets for juveniles of rainbow trout (*Oncorhynchus mykiss*)
*Mr. Bruno Tadeo Marota Lima*
June 6th, Wednesday

10:30 – 11:15  
Poster Session 4: Early Nutritional Interventions  
*Chairs: Deborah Fracalossi and Javier Roo*

Presentations P.4.01 – P.4.27

P.4.01  COPEPODS OR ROTIFERS? EVALUATING THE USE OF DIFFERENT FEEDING PROTOCOLS FOR LARVAE OF ATLANTIC BLUEFIN TUNA (Thunnus thynnus. L)  
Prof. Gabriel Mourente

P.4.02  Microalgae replacement by *Ulva rigida* in Pacific oysters (*Crassostrea gigas*) diet: effects on broodstock conditioning, gonadal maturation and spawning success  
Prof. Luisa M.P. Valente

P.4.03  Fatty acid composition of oocytes and eggs from wreckfish (*Polyprion americanus*) females fed with different diets  
Ms. Fátima Linares

P.4.04  Dietary fish oil replacement by soybean oil: Effect on plasma vitellogenin, sex steroids and ovarian steroidogenesis in Chinese strip-necked turtles (*Mauremys sinensis*)  
Dr. Meiling Hong

P.4.05  Does arachidonic acid affect the maturation and reproduction performance in virgin RAS-reared pikeperch breeders?  
Dr. Zsuzsanna Sándor J.

P.4.06  Arginine influences the *Rhamdia quelen* reproduction  
Prof. Elizabeth Ramagosa

P.4.07  Effect of food restriction on reproductive performances and egg quality in rainbow trout (*Oncorhynchus mykiss*)  
Dr. Sandrine Skiba

P.4.08  Early nutritional intervention using yeast in diets for smoltifying Atlantic salmon (*Salmo salar* L)  
Dr. Brankica Djordjevic

P.4.09  Nutritional imprinting in salmon fry  
Dr. Tone-Kari K Østbye

P.4.10  Nutritional programming in juveniles of the whiteleg shrimp (*Litopenaeus vannamei*) followed by a strong early feed restriction at post-larval stage  
Mr. Stephane Panserat

P.4.11  Genetic variation in digestibility in Atlantic salmon (*Salmo salar*)  
Ms. Hanne Dvergedal

P.4.12  Embryonic development in eggs of *Oreochromis niloticus*: digestive enzymes  
Ms. Mayara de Moura Pereira

P.4.13  Quantifying the endogenous production of omega-3 (n-3) long-chain polyunsaturated fatty acids (EPA and DHA) in Atlantic salmon (*Salmo salar*)  
Prof. Douglas R Tocher
P.4.14 Biosynthesis of very long-chain (>C24) polyunsaturated fatty acids in gilthead seabream (Sparus aurata) and Senegalese sole (Solea senegalensis): Investigating early ontogeny and nutritional regulation  
Mr. Miguel Torres Rodríguez

P.4.15 Effects of intraperitoneal injection of sulfur compounds on taurine synthesis in juvenile red seabream (Pagrus major)  
Ms. Tomoko Itoh

P.4.16 Long term effect of dietary methionine deficiency at the first feeding on hepatic metabolism in juveniles of rainbow trout  
Ms. Sarah Séité

P.4.17 Effects of microencapsulated diets containing fish meal or plant meal and supplemented with various levels of water-soluble vitamins on growth, survival and stress resistance of common carp (Cyprinus carpio L.) larvae  
Dr. László Ardó

P.4.18 Effect of dietary manganese and zinc supplementation on growth and bone status of Senegalese sole post-larvae  
Mr. Michael Viegas

P.4.19 Activity of catalase enzyme in tilapia larvae: supplemented diets with organic minerals  
Ms. Mayara de Moura Pereira

P.4.20 Influence of organic and inorganic minerals in tilapia larvae diets: catalase enzyme  
Prof. Elizabeth Romagosa

P.4.21 Experience of growing pikeperch (Sander lucioperca) larvae on artificial feeds  
Mr. Anatoliy Lyutikov

P.4.22 Hatchery performance of nile tilapia (Oreochromis niloticus) on a aquaponic system: egg quality, larval growth and ontogenic development of the digestive enzymes activities in larvae  
Dr. Leire Arantzamendi

P.4.23 Improving fish viability under challenging temperatures  
Dr. Sofia Engrola

P.4.24 Water temperature differentially affects the feed transit time through stomach and intestine in Cobia fry  
Dr. Manuel Yúfera

P.4.25 Food management and economic viability of tambaqui (Colossoma macropomum) cultivated in nurseries in Cacaulândia, Rondônia – Brazil.  
Prof. Xavier Meante Roica Esteves

P.4.26 Rotifers substitution in the larval feeding of Chilean corvina Cilus gilberti  
Dr. Ana Farias

P.4.27 Influence of dietary fatty acid profile on reproductive performance in gilthead seabream, Sparus aurata broodstock selected for high or low fads2 expression  
Mr. Ferozehkan Shajahan
10:30 – 11:15  **Poster Session 5: Integrative Tools in Aquaculture**  
*Chairs: Ron Hardy and Manuel Yúfera*  
Presentations P.5.01 – P.5.23

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<td>Dr. Ludgero Tavares</td>
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<td>Mr. Renato Ferraz</td>
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<td>Hepatic glucose metabolic responses to digestible dietary carbohydrates in two isogenic lines of rainbow trout</td>
<td>Dr. Stephane Panserat</td>
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<td>Ms. Si Zhu</td>
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<td>Mr. Gareth Gillard</td>
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P.5.15 Effect of plant-based diets with varying ratios of ω6 to ω3 fatty acids on growth, tissue composition, hepatic gene expression and fatty acid biosynthesis in Atlantic salmon (*Salmo salar*)  
Mr. Tomer Katan

P.5.16 A systemic study of lipid metabolism regulation in salmon larvae and early juvenile fed vegetable oil  
Mr. Yang Jin

P.5.17 Cysteamine pathway: a major taurine synthesizing pathway in common carp *Cyprinus carpio*  
Ms. Maria Mojena Gonzales-Plasus

P.5.18 Targeted gene expression panels and microbiota analysis provide insight into the effects of alternative production diet formulations on channel catfish nutritional physiology  
Prof. Brian Small

P.5.19 Regulating reproduction: RNA-seq analysis of variation in ovarian arachidonic acid levels in domesticated *Penaeus monodon*  
Dr. Nick Wade

P.5.20 Hypomethylated CG islands of sirtuin promoters in gilthead sea bream (*Sparus aurata*)  
Ms. Paula Simó-Mirabet

P.5.21 MicroRNAs associate with glucose metabolism in different organs of blunt snout bream (*Megalobrama amblycephala*)  
Dr. Lihong Miao

P.5.22 Dietary carbohydrate promotes de novo lipogenesis in barramundi (*Lates calcarifer*) as estimated using deuterated water (2H₂O)  
Dr. Ivan Viegas

P.5.23 Comparative analysis of digestive enzymes of sympatric pair of whitefishes (Altai Region, Russia)  
Dr. Mikhail Solovyev

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**June 7th, Thursday**

**10:30 – 11:15**

**Poster Session 6: Nutrition and Health**  
*Chairs: Delbert Gatlin and Enric Gisbert*

**Presentations P.6.01 – P.6.49**

P.6.01 *In vitro* evaluation of crude extracts of *Bacillus pumilus*, *Bacillus safensis* and *Pseudoalteromonas piscicida* against shrimp pathogenic bacteria and their potential antibacterial activity  
Dr. Lucia Elizabeth Cruz Suarez

P.6.02 Effect of mannooligosaccharides on African catfish (*Clarias gariepinus*) production  
Dr. Ayodeji Adeoye

P.6.03 Systematic review and meta-analysis highlight a paucity of published information regarding specific dietary influences on omega-3 fatty acid levels in fillet tissue of Atlantic salmon  
Mr. David Francis

P.6.04 How high-fat diet regulates the lipid accumulation in fish by intestinal microbiota  
Dr. Meiling Zhang

P.6.05 Analyzing epidermal mucus metabolites as non-invasive methodology on gilthead sea bream welfare: effects of dietary additives  
Mr. Ignasi Sanahuja

P.6.06 Evaluation of cassava chips as an alternative feed ingredient in hybrid tilapia (*Oreochromis niloticus* x *Oreochromis mossambicus*) aquaculture from gut health perspective  
Ms. Alyssa MacDonald
P.6.07 Threonine deficiency decreased intestinal immunity and aggravated inflammation associated with NF-κB and TOR signaling pathways in juvenile grass carp (Ctenopharyngodon idella) after infection with Aeromonas hydrophila
Prof. Lin Feng

P.6.08 GutMatters – A new project: “Defining and improving intestinal health in farmed salmon in Norway”
Prof. Åshild Krogdahl

P.6.09 Effects of life stages, smolt types (S0 and S1) and a functional feed on performance and gut health of Atlantic salmon (Salmo salar) under arctic conditions
Mr. Jie Wang

P.6.10 Intestinal health of Atlantic salmon fed yeast produced from non-food biomasses
Ms. Mette Hofossæter

P.6.11 Gut health and digestive function in the cleaner fish Ballan wrasse (Labrus bergylta)
Dr. Trond M. Kortner

P.6.12 Effect of yeast (Saccharomyces cerevisiae) products on African catfish (Clarias gariepinus) production
Dr. Ayodeji Adeoye

P.6.13 Effect of different dietary n-3 long-chain polyunsaturated fatty acids levels on stress response of meagre (Argyrosomus regius, Asso 1801) juveniles
Ms. Marta Carvalho

P.6.14 Can dietary vitamins modulate kidney antioxidant status of rainbow trout under high rearing conditions?
Dr. Cristina Elena Trenzado

P.6.15 Effects of vitamin E supplementation in the diet of Rohu
Dr. Naheed Bano

P.6.16 Effect on haematological parameters and plasma metabolites of dietary tryptophan supplementation in Dicentrarchus labrax reared at two density conditions
Dr. Amalia Pérez-Jiménez

P.6.17 Effect on growth performance and feed utilization of dietary tryptophan supplementation in Dicentrarchus labrax reared at two density conditions
Dr. Amalia Pérez-Jiménez

P.6.18 Stress-attenuating diets with amino acid supplements do not alter the energy metabolism in meagre (Argyrosomus regius)
Dr. Marcelino Herrera

P.6.19 Mucus metabolites to determine the netting stress in meagre: effects of preventive supplementation with specific amino acids
Dr. Laura Fernández-Alacid

P.6.20 Methionine and aurine effects on post inflammation oxidative stress in European sea bass (Dicentrarchus labrax) juveniles
Dr. Filipe Coutinho

P.6.21 Dietary citric acid supplementation alleviates soybean meal induced intestinal oxidative damage and micro-ecological imbalance in juvenile turbot, Scophthalmus maximus L.
Dr. Yanjiao Zhang

P.6.22 Effects of different dietary selenium sources on growth performance, liver and muscle composition, antioxidant status, stress response and expression of related genes in gilthead seabream (Sparus aurata)
Ms. Marwa Mechaoui
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P.6.23 Performance of rainbow trout (*Oncorhynchus mykiss*) fed diets varying in fishmeal and crude protein levels exposed to normal-growing or chronic-stress conditions
Dr. Ronald W. Hardy

P.6.24 Molecular characterization of enzyme families controlling the urea cycle and their transcriptional responses to inflammation in rainbow trout (*Oncorhynchus mykiss*)
Mr. Thomas Clark

P.6.25 Changes in antioxidant status, immune response and ammonia stress tolerance of juvenile Pacific white shrimp (*Litopenaeus vannamei*) fed different levels of dietary myo-inositol
Mr. Lixia Tian

P.6.26 Arginine or citrulline supplementation in diets for European seabass deteriorates host immune condition and inflammatory response
Dr. Rita Azeredo

P.6.27 Dietary glutamine supplementation on innate immune response of Nile tilapia subjected to bacterial challenge
Dr. Pedro L. P. F. Carvalho

P.6.28 Effects of dietary inosine 5’monophosphate on growth performance, immune response, and salinity tolerance of gibel carp
Mr. Haokun Liu

P.6.29 Progress towards a better understanding of the impact of diet on immunity of farmed Atlantic salmon (*Salmo salar*)
Dr. Albert Caballero-Solares

P.6.30 Growth, head kidney lipid composition, and gene expression in *Salmo salar* fed varying levels of different ω-3 and ω-6 PUFA
Dr. Chris Parrish

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Prof. Rina Chakrabarti

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Dr. Jon Øvrum Hansen

P.6.33 Origanum vulgare administered in fish diets enhance humoral and cellular immunity of gilthead seabream (*Sparus aurata L.*)
Mr. José María García Beltrán

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Dr. Femi Fawole

P.6.35 Beneficial combination of β–glucan with different dietary lipid sources on growth, immune response, fatty acid profile and expression of several genes involved in immunology, lipid biosynthesis and eicosanoid process in common carp (*Cyprinus carpio*)
Ms. Thi Mai Nguyen

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Mr. José Maria Garcia-Beltran

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Prof. Wei-Dan Jiang
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Dr. Sofia Morais

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Dr. Thiago El Hadi Perez Fabregat

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Prof. Subodh Gupta