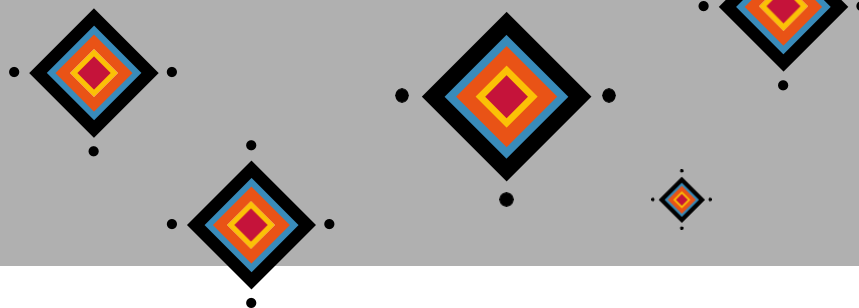




ISFNF 2024
International Symposium on Fish Nutrition and Feeding



Scientific Program



08:20 - 08:50 **OPENING CEREMONY**

09:00 - 09:30 **KEYNOTE LECTURE 1:**

PROTEIN AND OIL SOURCES FROM CIRCULAR ECONOMY. Valente L.

09:40 - 11:20

SESSION 1. PROTEIN SOURCES

09:40 A SELECTIVELY BRED HIPRO SOYA WITH REDUCED ANTINUTRIENTS AND INCREASED PROTEIN CONTENT IMPROVES PERFORMANCE OF ATLANTIC SALMON (*Salmo salar*). Zatti KM.

10:00 BEYOND NUTRITIONAL VALUE: MYCOPROTEIN *Paecilomyces variotii* IMPROVES GROWTH PERFORMANCE AND OVERALL HEALTH IN ATLANTIC SALMON (*Salmo salar*). Mensah DD.

10:20 NOVEL MICROBIAL PROTEIN SOURCES PRODUCED FROM FOREST SIDE STREAMS SUPPORT HIGH GROWTH PERFORMANCE, HEALTH, AND PRODUCT QUALITY OF ATLANTIC SALMON. Øverland M.

10:40 USE OF BLACK SOLDIER FLY LARVAE BY-PRODUCTS IN TILAPIA AND CATFISH NUTRITION. Romano NR.

11:00 ALTERNATIVE SALMON FEEDS DESIGNED FOR RECIRCULATING AQUACULTURE SYSTEMS USING REGENERATIVE NUTRITIONAL FEEDSTUFFS SOURCED FROM THE LOCAL CIRCULAR BIOECONOMY IN NOVA SCOTIA, CANADA. Colombo SM.

11:20 - 12:00 **Coffee Break**

12:00 - 14:00

SESSION 2. PROTEIN SOURCES

12:00 THE EFFECTS OF DIFFERENT SOYBEAN PROTEIN SOURCES ON GROWTH PERFORMANCE, FEED UTILIZATION EFFICIENCY, INTESTINE HISTOLOGY, AND GENE EXPRESSION OF PACIFIC WHITE SHRIMP (*Litopenaeus vannamei*). Davis DA.

12:20 FEEDING THE GILTHEAD SEA BREAM OF THE FUTURE: TOWARDS SUSTAINABLE AQUAFEEDS WITH SINGLE CELL PROTEINS. Bonaldo A.

12:40 KRILL MEAL REDUCES SEA LICE INFESTATION AND ENHANCES SKIN MUCOSAL HEALTH IN ATLANTIC SALMON. Kaur K.

13:00 THE NOVEL RAW MATERIAL *Calanus finmarchicus* IS A SOURCE OF PROTEIN PRODUCTS FOR WHITELEG SHRIMP (*Litopenaeus vannamei*). Abrahamsen H.

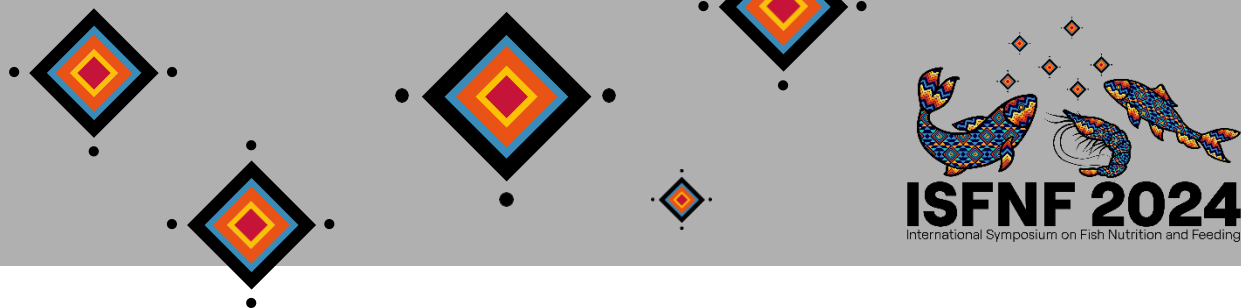
13:20 *Paecilomyces variotii* (PEKILO®) IN NOVEL FEEDS FOR ATLANTIC SALMON: EFFECTS ON PELLET QUALITY, GROWTH PERFORMANCE, GUT HEALTH, AND NUTRIENT DIGESTIBILITY AND UTILIZATION. Hoof JM.

13:40 DEVELOPMENT OF NON-FISH MEAL/NON-FISH OIL DIET FOR YELLOWTAIL *Seriola quinqueradiata* WITH MICRO ALGAE AND FEED STIMULANTS. Satoh S.

14:00 - 15:20 **LUNCH**

Tuesday May 28

Wednesday May 29



15:20 - 17:20

SESSION 3. LIPID SOURCES

- 15:20 THE EFFECT OF USING A NEREID POLYCHAETE AS AN ALTERNATIVE PROTEIN AND LIPID SOURCE IN DIETS FOR RED SEABREAM *Pagrus major*. Kabeya N.
- 15:40 CHLORELLA (*Chlorella vulgaris*) CAN SUCCESSFULLY PARTIALLY REPLACE DIETARY FISH MEAL IN LARGEMOUTH BASS (*Micropterus salmoides*). Ren M.
- 16:00 EFFECT OF DIFFERENT LEVELS OF DOCOSAHEXAENOIC ACID IN DIETS FOR MARKET SIZE OF ASIAN SEABASS *Lates calcarifer*, AND PERSISTENCE OF DHA IN BLOOD AND FLESH. Haga Y.
- 16:20 EFFECTS OF VARYING EPA/DHA RATIOS AND TOTAL EPA+DHA INCORPORATION IN SEA BASS AND SEA BREAM DIETS THROUGH ALGAL DHA SUPPLEMENTATION. Karalazos V.
- 16:40 INCLUSION OF EPA AND DHA-RICH OIL FROM TRANSGENIC *Camelina sativa* IN FEED FOR ATLANTIC SALMON (*Salmo salar*) GROWN TO MARKET SIZE IN SEAWATER PENS. Betancor MB.
- 17:00 REPLACEMENT OF FISH OIL BY A HIGH-DHA MICROBIAL OIL IN SALMON DIETS: EFFECT ON LIPID MOLECULAR SPECIES AND GENE EXPRESSION. Parrish CC.

18:00 - 19:00 **POSTER SESSION 2**

09:00 - 09:30 **KEYNOTE LECTURE 2:**

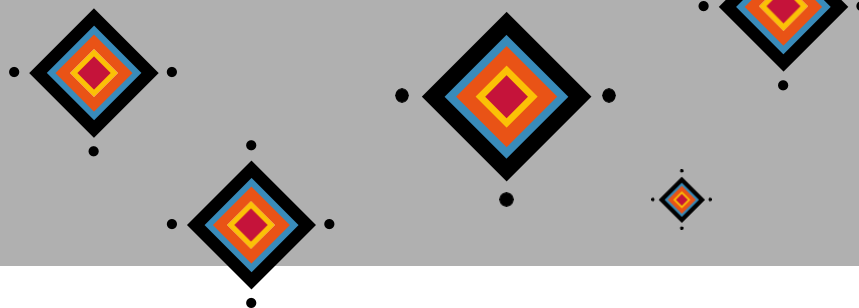
OPTIMIZING FISH DIETS: A COMPREHENSIVE REVIEW OF NUTRITIONAL REQUIREMENTS. Oliva-Teles A.

09:40 - 11:20

SESSION 4. NUTRIENTS AND FUNCTIONALITY

- 09:40 A METHIONINE AS A NUTRACEUTICAL INGREDIENT FOR THE EUROPEAN SEABASS. Machado M.
- 10:00 FROM IMMUNE TO NEUROENDOCRINE MODULATION - AN INTEGRATIVE VIEW OF TRYPTOPHAN AS A FEED ADDITIVE TO PROMOTE FISH WELFARE. Azeredo R.
- 10:20 METABOLIC RESPONSES OF YELLOW PERCH (*Perca flavescens*) TO DIETARY CARBOHYDRATE SOURCES AND LEVELS. Deng DF.
- 10:40 EFFECT OF CARBOHYDRATE TYPE (DEXTRIN, RAW STARCH, AND GELATINIZED STARCH) ON GROWTH, FEED EFFICIENCY, GLYCEMIC RESPONSE, AND DIGESTIVE CAPACITY OF *Morone saxatilis* CULTURED AT TWO TEMPERATURES IN SEAWATER. Garnica-Gómez LA.
- 11:00 THE DEVELOPMENT OF FEEDING BEHAVIOR, APPETITE AND SATIETY REGULATION IN GILTHEAD SEABREAM (*Sparus aurata*) LARVAE. Bitan A.

11:20 - 12:00 **Coffee Break**



12:00 - 14:00

SESSION 5. COMPARATIVE NUTRITION

- 12:00 COMPARATIVE STUDY OF N-3 PUFA UTILIZATION IN RAINBOW TROUT AND ATLANTIC SALMON. Bou M.
- 12:20 OPTIMUM VITAMIN NUTRITION AND CALCIFEDIOL IMPROVE PERFORMANCE OF WHITELEG SHRIMP (*Litopenaeus vannamei*) AND RAINBOW TROUT (*Oncorhynchus mykiss*). Liu A.
- 12:40 USING FACTORIAL MODELS AND THE IDEAL PROTEIN CONCEPT TO DESIGN CRUSTACEAN FORMULATED FEEDS. Yeap A.
- 13:00 UNDERSTANDING FEED TYPES, INTAKE AND FEEDING BEHAVIOUR IN FEMALE BROODSTOCK PENAEUS MONODON: EFFECTS ON GROWTH, TISSUE COMPOSITION AND METABOLOMICS, AND REPRODUCTIVE PERFORMANCE. Rombenso A.
- 13:20 DIFFERENT RATIOS OF DIGESTIBLE MACRONUTRIENTS AFFECTED PERFORMANCE DIFFERENTLY IN RAINBOW TROUT AT OPTIMAL CONDITIONS. Sixten HJ.
- 13:40 LYSO-PHOSPHOLIPID SUPPLEMENTATION AS STRATEGY TO REPLACE LECITHIN AND REDUCE COST OF SHRIMP FEEDS. Nuez-Ortín WG.

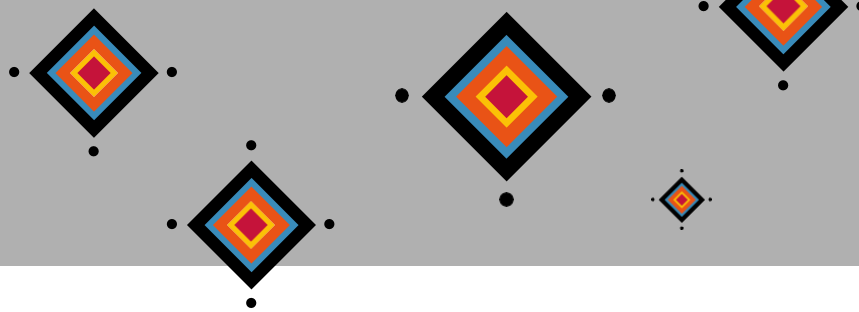
14:00 - 15:20 **LUNCH**

15:20 - 17:20

SESSION 6. ENVIRONMENT AND NUTRITION

- 15:20 IMPACTS OF MACRONUTRIENT COMPOSITION ON ATLANTIC SALMON AT HIGH TEMPERATURES. Wade NM.
- 15:40 EFFECT OF DIETARY TAURINE, CHOLESTEROL AND CHOLIC ACID ON ASTAXANTHIN DIGESTIBILITY AND DEPOSITION IN ATLANTIC SALMON (*Salmo salar*) REARED AT ELEVATED TEMPERATURE. Courtot E.
- 16:00 UNDERSTANDING THE IMPACTS OF THERMAL STRESS IN SALMON TISSUES USING PROTEOMICS AND METABOLOMICS. Mendoza-Porras O.
- 16:20 TRANSCRIPTOMICS REVEALS THE BIOLOGICAL MECHANISMS UNDERLYING THE IMPACT OF TRYPTOPHAN SUPPLEMENTATION IN FISH UNDER STRESSFUL CONDITIONS. Peixoto D.
- 16:40 COMPENSATORY GROWTH IN PACIFIC WHITE SHRIMP (*Penaeus vannamei*): FEEDING STRATEGIES, OXIDATIVE STRESS AND REARING IMPROVEMENT. Py C.
- 17:00 NILE TILAPIA JUVENILES REARED AT COLD SUBOPTIMAL WATER TEMPERATURES DO NOT BENEFIT FROM DIETARY SUPPLEMENTATION WITH CHOLESTEROL. Fracalossi DM.

18:00 - 19:00 **POSTER SESSION 3**



09:00 - 09:30 KEYNOTE LECTURE 3

A COMPLEX NEW WORLD FOR INGREDIENTS IN AQUACULTURE. Manomaitis L.

09:40 - 11:20

SESSION 7. HEALTH

09:40 FUCOIDAN FROM SUGAR KELP TO COORDINATE THE IMMUNE RESPONSE AND INTESTINAL MICROBIOTA IN ATLANTIC SALMON BY NUTRITIONAL PROGRAMMING. Rocha S.

10:00 OXYTETRACYCLINE DOSE REDUCTION IN SALMON FARMING: ASSESSING A MICRO ENCAPSULATED NOVEL FORMULATION IN AN IN VIVO MODEL. Wacyk J.

10:20 THE EFFECTS OF GLYCINE SUPPLEMENTATION IN SOYBEAN-MEAL-BASED DIETS AS A FUNCTIONAL AMINO ACID FOR JUVENILE HYBRID STRIPED BASS (*Morone chrysops* x *M. saxatilis*). Suehs BA.

10:40 IMPACT OF NOVEL OMEGA-3 LONG-CHAIN POLYUNSATURATED FATTY ACIDS-RICH OILS ON ATLANTIC SALMON, *Salmo salar*, HEALTH: SEA-LICE CHALLENGE. Salah AS.

11:00 A NOVEL SOLUTION TO COMBAT *Piscirickettsia salmonis*, THE CAUSATIVE AGENT OF SALMON RICKETTSIAL SEPTICAEMIA (SRS). Standen B.

11:20 - 12:00 Coffee Break

12:00 - 14:00

SESSION 8. NUTRITIONAL FRONTIERS

12:00 THE DEVELOPMENT OF METHODOLOGICAL APPROACHES AND DIGITAL TOOLS ENABLING EFFECTIVE ASSESSMENT OF FEED QUALITY AND THE EFFECTIVENESS NUTRITIONAL SOLUTIONS UNDER FIELD CONDITIONS. Bureau DP.

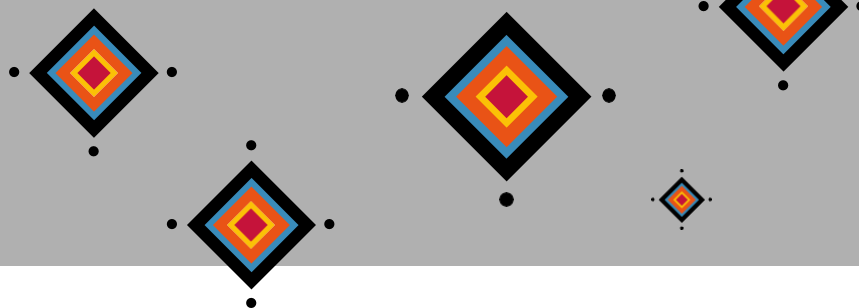
12:20 A RAINBOW TROUT (*Oncorhynchus mykiss*) ARTIFICIAL INTESTINE PLATFORM TO DISCRIMINATE BETWEEN CONTRASTING DIETS. Chacon MA.

12:40 OPTIMISING THE INCLUSION OF PROTEIN SOURCES IN DIETS FOR *Penaeus vannamei* USING A GEOMETRIC FRAMEWORK. Truong HH.

13:00 MACHINE LEARNING MODELS FOR REAL-TIME DISSOLVE OXYGEN AND TEMPERATURE PREDICTION IN FISH PONDS. Alaa J.

13:20 A NOVEL FEEDING STRATEGY BASED ON MUSCLE FIBER RECRUITMENT TO MAXIMIZE THE PERFORMANCE OF RAINBOW TROUT. Kumar V.

13:40 CARBON FOOTPRINT OF SALMON FEED: EFFECTS OF INCLUDING ALGAE. Jafarzadeh S.



09:00 - 09:30 KEYNOTE LECTURE 4

ECONOMIC AND SOCIETAL CHANGES THAT SHAPE OUR INDUSTRY; PAST, PRESENT AND FUTURE. Santigosa E.

09:40 - 11:20

SESSION 9. ADDITIVES

09:40 POSITIVE EFFECT OF MARINE SYMBIOTICS SUPPLEMENTATION ON FISH INTESTINAL MICROBIOTA DYSBIOSIS INDUCED BY ANTIBIOTIC TREATMENT. Giudicelli F.

10:00 FUCOIDAN FROM SUGAR KELP AS A FEED ADDITIVE TO IMPROVE TRAINED IMMUNITY-BASED VACCINE IN ATLANTIC SALMON AGAINST *Tenacibaculum maritimum*. Morales-Lange.

10:20 NUTRITIONAL STRATEGY COMBINING SATURATED LIPID SOURCES AND SUPPLEMENTATION WITH SPICES TO MITIGATE IMPACTS OF FISH OIL REDUCTION IN FISH FEEDS. Morais S.

10:40 IMMUNOMODULATORY EFFECTS OF LAMINARIN FROM *Laminaria hyperborea* ON ATLANTIC SALMON LEUKOCYTES- FIRST STEPS TOWARDS NOVEL FUNCTIONAL FEED APPLICATION FOR SALMON. Montero R.

11:00 ARE WE LEVERAGING THE FULL FUNCTIONALITY OF THE VITAMIN D SYSTEM? Rider S.

11:20 - 12:00 Coffee Break

12:00 - 14:00

SESSION 10. ADDITIVES

12:00 HOST-MICROBIOTA INTERACTIONS DRIVE THE PROBIOTICS ENRICHMENT IN THE MICROBIOTA OF *L. vannamei*: A HOLOGENOME PERSPECTIVE. Cornejo-Granados.

12:20 EFFECT OF DIETARY CHOLINE ON ENERGY FORTIFICATION IN ATLANTIC SALMON (*Salmo salar* L.). Yang BC.

12:40 MARINE INGREDIENTS AS ANTI-INFLAMMATORY FEED ADDITIVES: IN VITRO ASSESSMENT USING A CELL-BASED ASSAY AND IN VIVO RESULTS USING *Aurantiochytrium* sp. MEAL. Hoffling FB.

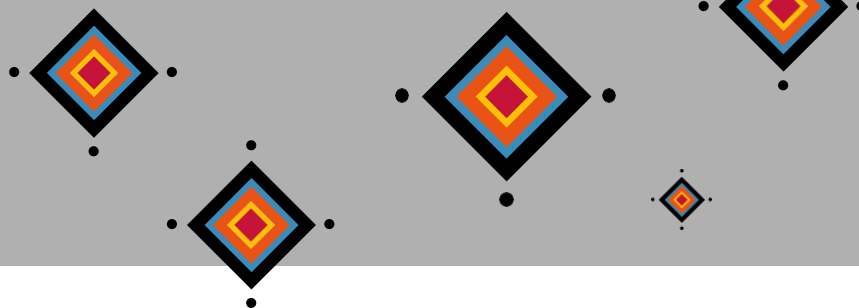
13:00 OPTIMAL IMMUNE FUNCTION IN FISH REQUIRES OPTIMAL MICRONUTRIENT SUPPLY. Kortner TM.

13:20 VITAMIN AND MINERAL REQUIREMENTS FOR OPTIMAL DISEASE RESISTANCE. A REVIEW. Krogdahl A.

13:40 DIETARY SUPPLEMENTATION OF EXOGENOUS PROTEASES IMPROVES PROTEIN AND AMINO ACID DIGESTIBILITY AND GROWTH PERFORMANCE OF JUVENILE *Penaeus vannamei*. Nunes AJP.

14:00 - 15:20 LUNCH

Friday May 31



15:20 - 17:20

SESSION 11. ADDITIVES

- 15:20 FUNCTIONAL AMINO ACIDS FOR NILE TILAPIA: A DOSE-RESPONSE STUDY FOR IMPROVING GROWTH AND HEALTH. Pereira RT.
- 15:40 PHYTOGENICS ENHANCE WELFARE AND VACCINE EFFICACY AGAINST VIBRIO ANGUILLARUM IN EUROPEAN SEABASS (*Dicentrarchus labrax*). Montero D.
- 16:00 MUCOSAL BIOMARKERS IN SALMON HEALTH DIAGNOSTICS: EVALUATING STRESS AND FUNCTIONAL INGREDIENTS. Djordjevic B.
- 16:20 CHROMIUM METHIONINE SUPPLEMENTATION IMPROVES CARBOHYDRATE UTILIZATION, PROTEIN RETENTION AND OVERALL PERFORMANCE OF RAINBOW TROUT. Moffitt MK.
- 16:40 COMPARATIVE STUDY OF NATURAL AND SYNTHETIC ASTAXANTHIN PIGMENTS FOR ENVIRONMENTALLY SUSTAINABLE AQUACULTURE PRACTICES. Vitale M.
- 17:00 DIVING INTO THE EFFECTS OF *Salicornia ramosissima* DERIVED COMPOUNDS ON SHRIMP GUT HEALTH. Garcia A.

17:20 - 18:00 **CLOSING CEREMONY**

19:00 - 22:00 **SYMPOSIUM DINNER**