

AQUACULTURE 2016



TUESDAY, February 23

PLENARY

Tuesday, February 23 8:30 - 10:00 Concorde B

Chair: Michael Masser

8:30 Association Awards

9:20 James Anderson

THE FUTURE OF AQUACULTURE AND ITS ROLE IN THE GLOBAL FOOD SYSTEM

PERCIDS AQUACULTURE

Tuesday, February 23 11:00 - 12:30 Concorde B

Chairs: Brian Sheppard, Gregory Fischer, J. Alan Johnson

11:00 Gregory Fischer

INTENSIVE PRODUCTION OF WALLEYE *Sander vitreus* AND HYBRID WALLEYE IN A RECYCLE WATER SYSTEM UTILIZING A DOMESTIC BROODSTOCK

11:15 Allyn Spear, Timothy Paul, Douglas Leaman, Mathilakath Vijayan, Carol Stepien, Brian Shepherd

THE INFLUENCE OF SEX AND ENVIRONMENTAL TEMPERATURE ON THE ACUTE STRESS RESPONSE OF JUVENILE YELLOW PERCH *Perca flavescens*

11:30 Carol Stepien, Eva Kramer, Allyn Spear, Brian Shepherd, Amanda Haponski, Oswaldo Sepulveda-Villet

COMPARATIVE POPULATION GENETIC STRUCTURE AND DIVERSITY OF YELLOW PERCH AND WALLEYE: BROAD- AND FINE-SCALE PATTERNS ACROSS NORTH AMERICA

11:45 Oswaldo Sepulveda Villet, Fred Binkowski, Brian Shepherd, Allyn Spear

THE EFFECT OF GENETIC IMPROVEMENT ON YELLOW PERCH: CHANGES IN GROWTH RATES, SIZE AT HARVEST, AND OVERALL GENETIC DIVERSITY

12:00 J. Alan Johnson
FEED RATE PREDICTION FOR LARVAE TO ADVANCED FINGERLING WALLEYE
Sander vitreus

12:15 Martin Vestergaard
EXPERIENCES AND CHALLENGES FARMING PIKEPERCH

STUDENT SPOTLIGHT

Tuesday, February 23 11:00 - 12:00 Champagne 1
Chair: Chris Green

11:00 Chris Green
THREE STUDENTS WITH THE TOP ABSTRACTS FROM THE THREE GROUPS (NSA, WAS, FCS) WILL BE PRESENTING AN ABBREVIATED VERSION OF THEIR FULL PRESENTATION

James Schwartz
EVALUATING EFFECTS OF FISH OIL REPLACEMENT WITH ALGAL OIL
Schizochytrium sp. IN THE DIET OF *Oncorhynchus mykiss*

Timothy Bruce
IMMUNOMODULATION IN RAINBOW TROUT *Oncorhynchus mykiss* FED BIOPROCESSED SOY DIETS AND CHALLENGED WITH *Flavobacterium psychrophilum*

Brunno da Silva Cerozi
PHOSPHORUS DYNAMICS MODELING AND MASS BALANCE IN AQUAPONICS

Ramje Odin
PRODUCTION OF CHANNEL CATFISH *Ictalurus punctatus* ♀ × BLUE CATFISH *Ictalurus furcatus* ♂ HYBRID PROGENY USING XENOGENESIS

Chuck Roe
IMPROVING SOY BASED FEED FORMULATIONS FOR THE FLORIDA POMPANO
Trachinotus carolinus USING NOVEL SOY PROTEIN CONCENTRATE

Sergio Castillo
DIETARY VALINE REQUIREMENT OF JUVENILE RED DRUM *Sciaenops ocellatus* AND THE EFFECT OF EXCESS BRANCHED-CHAIN AMINO ACIDS ON GROWTH PERFORMANCE

Kelli Barry
REEVALUATING THE ESSENTIAL FATTY ACID REQUIRMENTS OF RAINBOW TROUT *Oncorhynchus mykiss*

Alexis Bergman
CULTIVATION OF WHITE WORMS *Enchytraeus albidus* USING LOW- OR NO-COST FEED RESOURCES

Melissa Pierce
BIVALVES MAINTAIN A CORE GUT MICROBIOME: SEASONAL TRENDS AND SPECIES VARIATION

Hillary Lane Glandon
THE INTERACTIVE EFFECTS OF ACIDIFICATION AND WARMING ON THE GROWTH OF JUVENILE BLUE CRAB *Callinectes sapidus* FROM THE PATUXENT RIVER, CHESAPEAKE BAY

CRUSTACEANS

Tuesday, February 23 11:00 - 12:30 Chablis

Chair: Brad Stevens

- 11:00 Pedro Cruz**, Humberto Villarreal, José Naranjo, Mayra Vargas
EVALUATION OF GENETIC VARIABILITY OF THREE LINES OF *Cherax quadricarinatus* CULTURED IN MEXICO
- 11:15 Barclay T. Pace**, Wei Xu, Christopher C. Green
ANTIOXIDANT ACTIVITY AND IMMUNOLOGICAL GENE EXPRESSION INDUCED BY WHITE SPOT SYNDROME VIRUS (WSSV) INFECTION IN *Procambarus clarkii*
- 11:30 Benjamin A. Bowman**, Kristy M. Allen, Kenneth R. Thompson, Siddhartha Dasgupta, Vikas Kumar
REPLACEMENT OF FISHMEAL WITH ALTERNATIVE PROTEIN SOURCES FOR AUSTRALIAN RED CLAW CRAYFISH *Cherax quadricarinatus*
- 11:45 Hillary Lane Glandon**, Kennedy Paynter, Thomas Miller
THE INTERACTIVE EFFECTS OF ACIDIFICATION AND WARMING ON THE GROWTH OF JUVENILE BLUE CRAB *Callinectes sapidus* FROM THE PATUXENT RIVER, CHESAPEAKE BAY
- 12:00 J. Sook Chung**, I. S. Ahn
ONTOGENIC EXPRESSION OF CRUSTACEAN FEMALE SEX HORMONE (CFSH) AND ITS FUNCTIONAL ROLE IN DEVELOPING FEMALE SPECIFIC-SEX CHARACTERISTICS IN THE BLUE CRAB *Callinectes sapidus*
- 12:15 Leah Maurer**, J. Sook Chung
INFLUENCE OF PREY DENSITY AND DIETARY SUPPLEMENTATION ON THE LARVAL DEVELOPMENT OF THE BLUE CRAB *Callinectes sapidus*

VIBRIOSIS IN SHELLFISH AQUACULTURE

Tuesday, February 23 11:00 - 12:00 Vendome B

Chair: Claudia Hase

- 11:00 Gary P. Richards**
HATCHERY MORTALITIES OF LARVAL OYSTERS CAUSED BY *Vibrio tubiashii* AND *Vibrio coralliilyticus*
- 11:15 Saebom Sohn**, Meagan Hamblin, Lauren Gregg, David Rowley, David Nelson, Roxanna Smolowitz, Standish K. Allen, Jr., Marta Gómez-Chiari
DEVELOPMENT AND OPTIMIZATION OF PROBIOTICS FOR BIVALVE SHELLFISH HATCHERIES
- 11:30 Michael F. Marusich**, Carla B. Schubiger, Claudia C. Häse
A RAPID (1 HOUR), SIMPLE TEST FOR THE PACIFIC OYSTER PATHOGEN *Vibrio coralliilyticus* BASED ON DETECTION OF THE SHELLFISH VIBRIOSIS TOXIN VcpA WITH A SENSITIVE LATERAL FLOW "DIPSTICK" IMMUNOASSAY
- 11:45 Sarah Cumming**, Dan McCall, James Smith, Nicola Hawes, Rodney Roberts
ROLE OF OPPORTUNISTIC *Vibrio* SPECIES IN LARVAL REARING OF THE MUSSEL *Perna canaliculus*

COORDINATED FEDERAL PERMITTING PROCESS FOR AQUACULTURE IN THE GULF EEZ

Tuesday, February 23 11:00 - 12:30 Concorde A

Chair: Jess Beck-Stimpert

TUESDAY

- 11:00 Jenny Molloy**
OVERVIEW OF THE COORDINATED FEDERAL PERMIT PROCESS FOR
AQUACULTURE IN FEDERAL WATERS OF THE GULF OF MEXICO
- 11:15 Jess Beck-Stimpert**
NMFS GULF AQUACULTURE PERMIT (GAP) PROGRAM FOR FEDERAL WATERS
- 11:30 Jenny Molloy**
EPA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PERMITTING PROCESS FOR AQUACULTURE IN FEDERAL WATERS
- 11:45 Desiree Morningstar, Martin Mayer**
ARMY CORPS SECTION 10 PERMITTING PROCESS FOR AQUACULTURE IN
FEDERAL WATERS
- 12:00 QUESTION AND ANSWER SESSION**

GENERAL CONTRIBUTED

Tuesday, February 23 11:00 - 12:30 Burgundy

Chair: TBA

- 11:00 Thirugnanasambandam Ramanathan**
BIOPROSPECTING OF EAST COAST OF INDIAN MANGROVES
- 11:15 Gabriela Gaxiola, Carlos Maldonado, Gerogina Vargas, Adriana Paredes,
Ana Castillo, Alvaro Barreto, Miroslava Zepeda**
CHYTIN AND CORNSTARCH EFFECT ON GROWTH AND SURVIVAL OF WILD
JUVENILES OF RED GROUPER *Epinephelus morio*
- 11:30 Christina M. Belfranin, Jorge A. Suarez, Delbert M. Gatlin, Rick T. Barrows,
Daniel D. Benetti**
GROWTH PERFORMANCE AND FEED EFFICIENCY OF ADULT FLORIDA POMPANO
Trachinotus carolinus FED SEMI-PURIFIED DIETS WITH GRADED LEVELS OF
METHIONINE
- 11:45 Lisa Dyson**
HIGH PROTEIN AQUACULTURE FEED FROM CO2

AERATORS AND POND AERATION

Tuesday, February 23 11:00 - 12:30 Loire

Chair: Yoram Avnimelech

- 11:00 Claude E. Boyd**
A HISTORY OF AQUACULTURE POND AERATION RESEARCH
- 11:15 Eugene Torrans**
DISSOLVED OXYGEN MANAGEMENT IN CATFISH PONDS USING ELECTRIC PADDLEWHEEL AERATORS: NEW APPROACHES WITH OLD TECHNOLOGY
- 11:30 Trevor P. Luna**, Jeonghwan Park, David Heikes
THE EFFECT OF SCREEN SIZES AND CULVERT WATER RETURN AREA ON PUMPING PERFORMANCE OF A PADDLEWHEEL WATER CIRCULATOR IN A SPLIT-POND TEST SYSTEM
- 11:45 Yoram Avnimelech**
THE NEED TO DEVELOP BETTER POND AERATING SYSTEMS
- 12:00 DISCUSSION**

CULTURE OF YELLOW PERCH AND EUROPEAN PERCH: PRESENT “STATE-OF-THE-ART”

Tuesday, February 23 11:00 - 5:00 Concorde B

Chair: Konrad Dabrowski

- 2:15 Tomas Policar**, Miroslav Blecha, Petr Svacina, Jirí Křišťan
CURRENT EURASIAN PERCH *Perca fluviatilis* L. PRODUCTION, CULTURE, TECHNOLOGY AND PROGRESS IN EUROPE
- 2:30 John Grayson**, Jacques Rinchard, Konrad Dabrowski
COMPARING LIVE FOOD PUFA ENRICHMENT WITH AND WITHOUT TOCOPHEROL SUPPLEMENTATION FOR THE INTENSIVE CULTURE OF YELLOW PERCH *Perca flavescens* LARVAE
- 2:45 Megan Kemski**, Benjamin Schott, Macdonald Wick, Konrad Dabrowski
EFFECT OF NUTRITIONAL PROGRAMMING ON REPRODUCTIVE PERFORMANCE AND QUALITY OF PROGENIES IN YELLOW PERCH *Perca flavescens*
- 3:00 Mackenzie Miller**, Konrad Dabrowski, Megan Kemski, John Grayson, Kristen Towne
IMPROVING THE EFFECTIVENESS OF SIMPLE CRYOPRESERVATION TECHNIQUES ON SPERM OF YELLOW PERCH *Perca flavescens*
- 3:15 Kristen Towne**, Konrad Dabrowski
SEX REVERSAL OF YELLOW PERCH *Perca flavescens* EXPOSED TO 17 α -METHYLTESTOSTERONE OR ESTRADIOL BY IMMERSION OR ORALLY AND GROWTH STUDY FOLLOWING EXPOSURE
- 3:30 Mohammad Alam**, Mackenzie Miller, Seth Collingwood, Jarrod Pollock, Kaitlyn Wagner, Konrad Dabrowski
HYPOXIC THRESHOLD FOR YELLOW PERCH *Perca flavescens* EMBRYONIC DEVELOPMENT
- 3:45 Konrad Dabrowski**, Mackenzie Miller
HYBRIDIZATION OF YELLOW PERCH FEMALE WITH OTHER PERCIDS

ZEBRAFISH

Tuesday, February 23 2:00 - 5:00 Vendome A

Chair: Bobbi Baur

TUESDAY

2:00 Mark Francis
INTRODUCTION

Marc Tye
ZHA UPDATE

Stewardship Award

Katy Murray
ZIRC UPDATE

Hugh Hammer
GADSDEN UPDATE

ZHA SPONSORED SESSION

2:45 Dante D'India
IMPROVED LONG-TERM IMAGING OF EMBRYOS WITH GENETICALLY ENCODED A-BUNGAROTOXIN

3:05 David Marancik
OPPORTUNISTIC BACTERIAL PATHOGENS OF ZEBRAFISH AND IMPLICATIONS FOR EVIDENCE-BASED DISEASE MANAGEMENT

3:25 Claire Allen
HUSBANDRY ADVANCES USING KEY PRINCIPLES OF ANIMAL WELFARE

3:45 Dan Castranova
USING OVAPRIM TO ENHANCE REPRODUCTIVE PERFORMANCE IN LABORATORY REARED ZEBRAFISH

4:05 Jim Burris
IS THERE A "GOLDEN PERIOD" FOLLOWING UNEXPECTED SHUTDOWN OF A ZEBRAFISH RECIRCULATING AQUACULTURE SYSTEM?

4:25 Stephen Canter
AN EVALUATION OF FEEDS USED IN ROTIFER CULTURES AND EFFECTS ON ZEBRAFISH HUSBANDRY AT WUSTL ZEBRAFISH FACILITY

PHYSIOLOGICAL INSIGHTS TOWARDS IMPROVING FISH CULTURE IV

Tuesday, February 23 11:00 - 5:00 Versailles 2

Chairs: Kurt Gamperl, Matt Rise, Brian Small, Greg Weber

Development and Reproduction

Moderator: Greg Weber

11:00 Yonathan Zohar, Olivia Spicer, Miranda Marvel, Ten-Tsao Wong, Nilli Zmora
FISH REPRODUCTION – EXACTLY WHO IS IN CONTROL?

- 11:30 Benjamin Reading**, Andrew Baltzegar, Justin Schilling, Naoshi Hiramatsu
MULTIPLE VITELLOGENINS AND THEIR RECEPTORS IN FISHES
- 11:45 Jian Wang**, Jianbo Yao
ASSEMBLY AND CHARACTERIZATION OF THE RAINBOW TROUT EGG TRANSCRIPTOME
- 12:00 Hao Ma**, Gregory M. Weber, Guangtu Gao, Hairong Wei, Jianbo Yao
IDENTIFICATION OF MITOCHODRIAL GENOME-ENCODED SMALL RNAS RELATED TO EGG QUALITY DETERIORATION CAUSED BY POST-OVULATORY AGING IN RAINBOW TROUT
- 12:15 Gregory M. Weber**, Hao Ma, Carlos Jose Hoff de Souza, Timothy D. Leeds, Guangtu Gao
CHANGES IN GENE EXPRESSION DURING FOLLICLE MATURATION IN RAINBOW TROUT *Oncorhynchus mykiss*
- 12:30 LUNCH**
- 1:30 Prasanthi Koganti**, Jian Wang, Beth Cleveland, Gregory M. Weber, Jianbo Yao
NON-CpG METHYLATION IN THE FIRST EXON OF THE MYOGENIC TRANSCRIPTION FACTOR MyoD IN RAINBOW TROUT MUSCLE IS AFFECTED BY ESTROGEN
- 2:15 Adam Luckenbach**, William Fairgrieve, Edward Hayman
MONOSEX PRODUCTION AND INSIGHT INTO MECHANISMS OF SEX DETERMINATION AND DIFFERENTIATION IN SABLEFISH *Anoplopoma fimbria*
- 2:30 Brian Peterson**, Nagaraj Chatakondi
EFFECTS OF VITAMIN C ON PERCENT NEURULATION, HATCH, GROWTH, AND SURVIVAL OF HYBRID CATFISH CHALLENGED WITH VIRULENT *Edwardsiella ictaluri*
- 2:45 Ramjie Y. Odin**, Khoi Vo, Ahmed Alsaqufi, Dayan Perera, Shang Mei, Baofeng Su, Sheng Dong, Guyu Qin, Ahmed Elawad, Karim Khalil, Elizabeth Lipke, Eric Peatman, Rex A. Dunham
PRODUCTION OF CHANNEL CATFISH *Ictalurus punctatus* ♀ × BLUE CATFISH *Ictalurus furcatus* ♂ HYBRID PROGENY USING XENOGENESIS
- 3:00 Nagaraj Chatakondi**, Geoff Waldbieser
POTENCY OF BLUE CATFISH *Ictalurus furcatus* (INDIVIDUAL VS. POOLED) SPERM TO FERTILIZE STRIPPED CHANNEL CATFISH *I. punctatus* EGGS ON THE PRODUCTION AND PERFORMANCE OF PROGENY
- 3:15 Maureen Ritter**, Jorn Ulheim, Jan Sunde
A NEW METHOD FOR MAXIMIZING THE USE OF SPERM CELLS FROM GONADS – A MULTI-SPECIES APPROACH

Stress, Environmental Challenges and Fish Welfare
Moderator: Kurt Gamperl

- 3:30 Erik Sandblom**
STUNNING OF ARCTIC CHAR *Salvelinus alpinus* WITH CARBON DIOXIDE AND ELECTRIC FIELD EXPOSURE: PHYSIOLOGICAL INSIGHTS ON MECHANISMS OF LETHALITY AND WELFARE IMPLICATIONS

- 4:00 Albin Gräns**, Erik Sandblom, Henrik Sundh, Charlotte Berg, Kristina Sundell, Michael Axelsson
BIOTELEMETRY AS A TOOL TO IMPROVE FISH WELFARE IN AQUACULTURE
- 4:15 Michael Ciaramella**, M. Wes Schilling, Peter Allen
THE EFFECTS OF ENVIRONMENTAL AND HANDLING STRESS ON THE PHYSIOLOGY AND MEAT QUALITY OF CHANNEL CATFISH
- 4:30 Morris Villarroel**, Ruben Bermejo-Poza, Fernando Torrent, Elisabeth González de Chavarri, Concepción Pérez, Jesús de la Fuente
WELFARE AND FLESH QUALITY OF SPANISH RAINBOW TROUT WHEN ELECTRICALLY STUNNED
- 4:45 Henrik Sundh**, Albin Gräns, Jeroen Brijs, Erik Sandblom, Michael Axelsson, Torbjörn Lundh, Anders Kiessling, Bo Algers, Charlotte Berg, Kristina Sundell
PHYSIOLOGICAL MECHANISMS BEHIND STRESS INDUCED INTESTINAL PRIMARY BARRIER DYSFUNCTION IN RAINBOW TROUT *Oncorhynchus mykiss*

ALGAE FOR AQUAFEED

Tuesday, February 23 11:00 - 5:00 Champagne 3
Chairs: Patricia Abelin, John Bennemann

- 11:00 John Benemann**
ALGAE CULTURE FOR AQUAFEEDS
- 11:15 Matthew Carr**
ALGAE AS AQUAFEED: NEW DEVELOPMENTS IN THE U.S.
- 11:30 Vítor Verdelho**, Joana Lapa, Tiago Guerra, Pilar Ramirez
ALGAE FOR AQUAFEEDS – EUROPEAN ACTIVITIES AND BEYOND
- 12:00 Walter Rakitsky**
PROTEIN AND LIPID RICH MICROALGAE INGREDIENTS PRODUCED BY HETEROTROPHIC FERMENTATION OF PLANT DERIVED INPUTS FOR USE IN AQUACULTURE FEEDS
- 12:30 LUNCH**
- 2:00 Stefan Kraan**
USING MACROALGAE AS FEED INGREDIENTS IN AQUAFEED, IMPROVING HEALTH WHILE CLOSING THE NUTRIENT CYCLE!
- 2:30 Keith Filer**
MICROALGAE FROM FERMENTATIONS FOR FISH OIL REPLACEMENT
- 3:00 Amha Belay**
NUTRITIONAL AND THERAPEUTIC POTENTIAL OF SPIRULINA *Arthrospira* AS AN AQUACULTURE FEED
- 3:15 Len Smith**
NATURAL ALGAL ASTAXANTHIN PRODUCTS FOR HIGH-END AQUACULTURE
- 3:30 Craig Behnke**, Rebecca Ryan
PRODUCTION OF AQUACULTURE FEED INGREDIENTS USING OPEN POND ALGAE CULTIVATION

- 3:45 Nuno Coelho**, Edgar Santos
MICROALGAE AQUACULTURE FEED PRODUCTION AT A4F IN PORTUGAL
- 4:00 William van der Riet**, Viktor Chepurinov
CONVERTING ALGAE ART TO ALGAE TECHNOLOGY IN HATCHERY APPLICATIONS
- 4:15 Martin Sabarsky**
CELLANA'S ALDUO™ PROCESS: THE FARMING OF ALGAE-BASED AQUAFEEDS
- 4:30 Tim Reed**
MICROALGAE APPLICATIONS AND POTENTIAL IN HATCHERIES
- 4:45 FORUM FOR Q&A AND DISCUSSION**

AQUACULTURE EXTENSION AND EDUCATION: ADVANCING, IMPROVING, AND DOING

Tuesday, February 23 11:00 - 5:00 Versailles 3

Chairs: Anoushka Concepcion, Anne Langston

- 11:00 Gef Flimlin**, Margaret Fogarty
INVESTING IN NEW MARKET PARADIGMS FOR SHELLFISH FARMERS
- 11:30 Ganesh Kumar**, Carole Engle
ADOPTION OF TECHNOLOGIES: WHAT INFLUENCES FARMERS' DECISIONS TO CHANGE FARMING PRACTICES?
- 11:45 David Cline**
SIMPLE TECHNIQUES TO ENHANCE YOUR PRESENTATION USING POWER POINT
- 12:00 Kenneth J. Semmens**
BUILDING AN AQUACULTURE INDUSTRY: A PERSPECTIVE ON CRITICAL COMPONENTS
- 12:15 Emma Wiermaa**, Greg Fischer, Chris Hartleb
EDUCATING THE FUTURE AND PRESENT WORKFORCE THROUGH INTERACTIVE, HANDS-ON APPLICATIONS OF AQUACULTURE
- 12:30 LUNCH**
- 2:00 Courtney Ohs**, Carlos Martinez, LeRoy Creswell
SUCCESSFUL IMPLEMENTATION OF THE TEACH AQUACULTURE CURRICULUM
- 2:15 Carlos V. Martinez**
TEACH AQUACULTURE: SUCCESS STORIES RELATED TO THE IMPLEMENTATION OF THE "TEACH AQUACULTURE CURRICULUM" IN BOTH MIDDLE AND HIGH SCHOOLS IN THE STATE OF FLORIDA AS WELL AS MIDDLE SCHOOL OUTREACH
- 2:30 Laura Wilson**, Sarah Sparks, Kimberly Caron
DEVELOPMENT OF A "GRAB-AND-GO" 4-H SCIENCE AQUACULTURE TOOLKIT FOR USE BY DIFFERENT FACILITATORS
- 2:45 Michael Shane**, Mark Drawbridge
SEABASS IN THE CLASSROOM: FISH AND STUDENTS GET SCHOOLED IN AQUACULTURE

- 3:00 Nicole Kirchoff**, Jean Ingelmo
EXPANSION OF PINFISH MARKET THROUGH TECHNOLOGY TRANSFER TO BAIT-AND-TACKLE STORES
- 3:15 Rosie Abalos**, Shella Parreno, Emmanuel Federico Capinpin Jr., Geronimo Rosario, Raul Dela Pena
THE IMPLEMENTATION OF THE PHILIPPINE NATIONAL AQUASILVICULTURE PROGRAM: PANGASINAN STATE UNIVERSITY EXPERIENCE
- 3:30 Bernadette Fregene**, Emmanuel Ajani, Bamidele Omitoyin, Latifat Busari
GENDER DIMENSIONS OF ADOPTING CLIMATE-SMART INTEGRATED AQUACULTURE IN NIGERIA
- 3:45 Ramjie Y. Odin**, Cesar Galvan
RESTORING LIVELIHOODS IN CONFLICT-AFFECTED AREAS IN MAGUINDANAO PROVINCE OF THE AUTONOMOUS REGION IN MUSLIM MINDANAO IN THE PHILIPPINES THROUGH AQUACULTURE
- 4:00 Joseph R. Sullivan**
VOLUNTEER OPPORTUNITIES WITH SMALL SCALE AQUACULTURE AND FISHERIES IN THE UNITED STATES PEACE CORPS AND THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT'S JOHN OGWONOWSKI AND DOUG BEREUTER FARMER-TO-FARMER PROGRAM
- 4:15 Khalid Salie**, Wendy Engel
IMPACT OF KNOWLEDGE TRANSFER MEDIA ON FISH FARMERS IN THREE PROVINCES OF SOUTH AFRICA

AQUAPONICS

Tuesday, February 23 11:00 - 5:00 Champagne 2

Chair: Huy Tran

- 11:00 Morris Villarroel**, Benz Kotzen, Agnes Joly, Bettina Konig, Junge Ranka, Ignacio Plaza, Tamas Komives, András Bittsánszky
SURVEY OF AQUAPONICS IN EUROPE
- 11:15 Paul Brown**
AQUAPONICS: ADVANCED FOOD PRODUCTION SYSTEMS, BUT ARE THEY SUSTAINABLE AND IS SUSTAINABILITY ENOUGH?
- 11:30 Adam Cohen**
FROM GREENHOUSE MANAGEMENT TO FULL SPECTRUM SUSTAINABILITY: THE GROWTH OF THE AGRICULTURE PROGRAM AT SANTA FE COMMUNITY COLLEGE
- 11:45 James M. Ebeling**, Michael B. Timmons, Michael Malone
A "FAMILY" OF ENGINEERING DESIGNS FOR HOME/SCHOOL, SMALL FARM/ URBAN SETTINGS AND SMALL/LARGE SCALE COMMERCIAL AQUAPONIC SYSTEMS
- 12:00 Carlos León**
AQUAPONICS IN SMALL SCALE FOR RURAL AND EDUCATION
- 12:15 J.L. Giovanna Hesley**, James M. Ebeling
THE DESIGN, CONSTRUCTION AND MANAGEMENT OF FIVE SCHOOL BASED AQUAPONIC SYSTEMS IN TUCSON, ARIZONA

12:30 LUNCH

- 2:00 Wenresti Gallardo**, Mohammed Al Mahfudhi, Mohammed Al Siyabi
RECIRCULATING VERSUS NON-RECIRCULATING AQUAPONIC SYSTEM: WATER QUALITY AND GROWTH AND SURVIVAL OF TILAPIA AND LETTUCE
- 2:15 George Brooks Jr.**
THE FEASIBILITY OF AQUAPONIC DEVELOPMENT IN PHOENIX, ARIZONA
- 2:30 Carlos León**
AQUAPONICS IN HYBRID INTEGRATED SYSTEM
- 2:45 Kevan Main**, Suzanne Boxman, Michael Nystrom, Sarina Ergas, Maya Trotz
EVALUATING THE PERFORMANCE OF A MARINE AQUAPONIC SYSTEM PRODUCING RED DRUM *Sciaenops ocellatus* AND TWO SPECIES OF SALTWATER VEGETABLES
- 3:00 Carlos León**
MULTITROPHIC AQUAPONICS USING SHRIMP, TILAPIA AND HALOPHYTES IN A LOW SALINITY SYSTEM
- 3:15 Huy Tran**
APPLYING COUPLED AND DE-COUPLED AQUAPONICS TO BETTER UTILIZE RAS WATER
- 3:30 Ricardo Radulovich**, Rebeca Mata, María José Rodríguez
GROWING HALOPHYTES DIRECTLY AT SEA
- 3:45 Allen Pattillo**, James Wamboldt
EFFECTS OF COMPOSTING WORM SPECIES AND ABUNDANCE ON LETTUCE AND BARRAMUNDI *Lates calcarifer* PRODUCTION IN AN AQUAPONICS SYSTEM
- 4:15 Sarah K. Taber**
MITIGATING FOOD SAFETY HAZARDS IN AQUAPONICS
- 4:30 Brad Todd**
ALTERNATIVE HEATING OPTIONS FOR COMMERCIAL AQUAPONICS
- 4:45 Brad Todd**
CROP CHOICES FOR AQUAPONIC PROFITABILITY

SHRIMP HEALTH AND DISEASE

Tuesday, February 23 2:00 - 5:00 Champagne 1

Chairs: Jeffrey Lotz, Reginald Blaylock

- 2:00 Edgar Amar**, Rolando Gapsin, Joseph Faisan, Jr.
FIELD EFFICACY EVALUATION OF A FORMALIN-INACTIVATED WHITE SPOT SYNDROME VIRUS (WSSV) VACCINE FOR THE PREVENTIVE MANAGEMENT OF WSSV INFECTION IN BRACKISH WATER SHRIMP PONDS
- 2:15 Alvaro Ortiz**, Pilar Honrubia, João Dantas Lima, Juan J. Mallo
EFFICACY OF PROBIOTIC *Bacillus amyloliquefaciens* CECT 5940 AGAINST EMS/ AHPND *Vibrio parahaemolyticus*

- 2:30 Jeffrey M. Lotz**
MODELING PATHOGEN DYNAMICS FOR DISEASE CONTROL IN MARINE AQUACULTURE
- 2:45 Jeffrey Lotz, Muhammad Muhammad, Stephen Curran, Reginald Blaylock**
RESERVOIRS OF *WHITE SPOT SYNDROME VIRUS* IN THE NORTHERN GULF OF MEXICO
- 3:00 Joseph Leopoldo Laranja, Peter De Schryver, Edgar Amar, May Joy Geaga, Yufeng Niu, Peter Bossier**
PHB ACCUMULATING *Bacillus* sp. JL47 PROTECTS *Penaeus monodon* POSTLARVAE AGAINST PATHOGENIC *Vibrio campbellii* BY ENHANCING THE INNATE IMMUNE RESPONSE
- 3:15 Jee Eun Han, Kathy F.J. Tang, Donald V. Lightner**
RECENT STUDIES ON SHRIMP MICROSPORIDIAN INFECTION: ENTEROCYTOZOOM HEPATOPENAEI (EHP) AND COTTON SHRIMP DISEASE
- 3:30 Jee Eun Han, Kathy F.J. Tang, Donald V. Lightner**
RECENT STUDIES ON ACUTE HEPATOPANCREATIC NECROSIS DISEASE (AHPND), ALSO KNOWN AS EARLY MORTALITY SYNDROME, EMS)
- 3:45 I.S. Bright Singh, Somnath S. Pai, A.A. Anas**
BACTERIOPHAGES ISOLATED FOR THE CONTROL OF PATHOGENIC *Vibrio harveyi* IN SHRIMP HATCHERIES
- 4:00 Maarten Jay van Schoonhoven, Jintasataporn Orapint**
EFFECT OF AN ALGAE-CLAY BASED BIOCATALYST ON THE DIGESTIVE AND GROWTH PERFORMANCE OF JUVENILE SHRIMP *Litopenaeus vannamei*
- 4:15 Stephen Blezinger, Orapint Jintasataporn, Melina Bonato, Glycon Santos, Stephen Blezinger**
Saccharomyces cerevisiae CELL WALL SUPPLEMENTATION ON GROWTH PERFORMANCE AND IMMUNITY STATUS OF WHITE SHRIMP *Litopenaeus vannamei*

TUNA AND SERIOLA

Tuesday, February 23 2:00 - 5:00 Concorde C

Chairs: Dan Benetti, Alex Buentello

- 2:00 Daniel Benetti, Gavin Partridge, Alejandro Buentello, John Stieglitz**
OVERVIEW AND RECENT PROGRESS ON TUNA AQUACULTURE
- 2:15 Vernon Scholey, Daniel Margulies, Jeanne Wexler, Maria Stein, Shukei Masuma, Yoshifumi Sawada**
SPAWNING HISTORY OF BROODSTOCK YELLOWFIN TUNA *Thunnus albacares* AND IMPROVED METHODOLOGY FOR THEIR CAPTURE AND MAINTENANCE
- 2:30 Daniel Margulies, Jeanne Wexler, Maria Stein, Vernon Scholey, Tomoki Honryo, Michio Kurata, Yang-Su Kim, Taro Matsumoto, Amal Biswas, Amado Cano, Yasuo Agawa, Yoshifumi Sawada**
LABORATORY RESEARCH ON EARLY LIFE STAGES OF YELLOWFIN TUNA *Thunnus albacares* WITH AN EMPHASIS ON JUVENILE REARING STUDIES

- 2:45 Jeanne Wexler**, Daniel Margulies, Maria Stein, Yang-Su Kim, Tsukasa Sasaki, Tomoki Honryo, Vernon Scholey, Angel Guillen, Yasuo Agawa, Yoshifumi Sawada
COMPARATIVE GROWTH AND SURVIVAL STUDIES OF YELLOWFIN *Thunnus albacares* AND PACIFIC BLUEFIN *Thunnus orientalis* TUNA LARVAE
- 3:00 Alejandro Buentello**, Manabu Seoka, Joseph Kearns, Delbert Gatlin
SOY PRODUCTS, EXTRUSION TECHNOLOGY AND NUTRITION: TOWARDS THE PRACTICAL FEEDING OF RANCHED TUNA
- 3:15 CANCELLED**
- 3:30 Yasuo Agawa**, Yoshihiro Takada, Yoshiyuki Yamane, Yoshifumi Sawada
IDENTIFICATION OF MALE AND FEMALE CHARACTERISTIC DNA MARKER OF PACIFIC BLUEFIN TUNA
- 3:45 Amal Biswas**, Teruyoshi Tanaka, Yasuo Agawa, Yoshifumi Sawada, Kenji Takii
PREDICTION OF SOMATIC GROWTH PATTERN FROM CHANGES IN RNA, DNA AND PROTEIN SYNTHESIS AT EARLY STAGES IN YELLOWFIN TUNA *Thunnus albacares*
- 4:00 Jorge Gomezjurado**, Oded Zmora, Neven Cinoti, Vice Katacic, John Stubblefield, Yonathan Zohar
FIRST PRODUCTION OF ATLANTIC BLUEFIN TUNA LARVAE AND JUVENILES IN RECIRCULATING AQUACULTURE SYSTEMS IN NORTH AMERICA
- 4:15 Jose Fernandez Polanco**, Ignacio Llorente
TRADE FLOWS OF BLUEFIN TUNA COMMODITIES IN THE MEDITERRANEAN
- 4:30 Lisa Armbruster**, Kevin Stuart, Mark Drawbridge, Ronald Johnson
CALIFORNIA YELLOWTAIL *Seriola lalandi* EGG QUALITY AND CHEMICAL COMPOSITION
- 4:45 Luis Carlos Astiazarran**, Roberto Flores-Aguilar, Mauricio Moreno
BAJA SEAS: THE FIRST COMMERCIAL YELLOWTAIL HIRAMASA *Seriola lalandi* IN MEXICO

MARINE AQUACULTURE IN A CHANGING ENVIRONMENT

Tuesday, February 23 2:00 - 5:00 Vendome B

Chairs: Mike Rust, Carol Price

- 2:00 Carol Price**, Mike Rust, James A. Morris, Jr.
ENVIRONMENTAL CHANGE AND AQUACULTURE: WHAT DOES THE FUTURE HOLD?
- 2:15 Carol Price**, James Morris, Jr., Todd Kellison, Mary Hunsicker
CLIMATE CHANGE IMPACTS ON U.S. MARINE AQUACULTURE: A REGIONAL PERSPECTIVE
- 2:30 Kenneth Black**, Marcello Graziano
MARINE AQUACULTURE TO MITIGATE FOOD DEFICITS CAUSED BY ENVIRONMENTAL CHANGE

- 2:45 Leila Basti**, Kiyohito Nagai, Tatsuya Oda, Satoshi Nagai, Yuji Tanaka
REPRODUCTION OF BIVALVE MOLLUSCS IN A CHANGING ENVIRONMENT:
IMPACT OF HARMFUL ALGAL BLOOMS AND IMPLICATIONS FOR AQUACULTURE
- 3:00 Luc Comeau**, Thomas Guyonnet, Cédric Bacher, Jon Grant, Rune Rosland,
Rémi Sonier, Ramón Filgueira
CLIMATE CHANGE INFLUENCES CARRYING CAPACITY IN A COASTAL
EMBAYMENT DEDICATED TO SHELLFISH AQUACULTURE
- 3:15 Joao G. Ferreira**, Suzanne B. Bricker, Julie M. Rose, Robin Landeck Miller,
Philip Trowbridge, Raymond E. Grizzle, Katharine Wellman, Mark A. Tedesco
SHELLFISH AQUACULTURE FOR SEAFOOD PRODUCTION AND WATER QUALITY
IMPROVEMENT
- 3:30 Kristen Gruenthal**, Michael Canino, Dayv Lowry, Lorenz Hauser
OPPORTUNITIES AND PITFALLS FOR CONSERVATION AQUACULTURE IN A
WARMING WORLD: PACIFIC COD AS A CASE STUDY
- 3:45 PANEL DISCUSSION**

PARTITIONED AND INTENSIVE AQUACULTURE SYSTEMS

Tuesday, February 23 2:00 - 5:00 Loire

Chair: Dave Brune

- 2:00 Matthew Recsetar**, Luke Roy, Jeonghwan Park
EVOLUTION OF INTENSIVE AQUACULTURE SYSTEMS IN ARKANSAS
- 2:15 Craig S. Tucker**, Travis W. Brown, Jonathan W. Pote, Charles L. Wax
IMPACT OF PRODUCTION INTENSIFICATION ON WATER USE EFFICIENCY IN
CATFISH POND AQUACULTURE
- 2:30 Eugene Torrans**, Brian Ott, Craig Tucker
INTENSIVE PRODUCTION OF HYBRID CATFISH
- 2:45 Eugene L. Torrans**, Travis W. Brown, Craig S. Tucker
CATFISH PRODUCTION USING INTENSIVE, POND-BASED CULTURE SYSTEMS IN
MISSISSIPPI
- 3:00 Craig S. Tucker**, Travis W. Brown
PERFORMANCE EVALUATION OF PUMPING SYSTEMS USED IN COMMERCIAL-
SCALE, SPLIT-POND AQUACULTURE
- 3:15 David Brune**, Travis W. Brown, Craig S. Tucker
CATFISH PRODUCTION AND OXYGEN AND NITROGEN DYNAMICS IN SPLIT,
INTENSIVE, AND CONVENTIONAL CATFISH PRODUCTION PONDS
- 3:30 Herbert Quintero**, Jeonghwan Park, Luke Roy, Anita Kelly, David Heikess
COMPARISON OF DIFFERENT POND PRODUCTION SYSTEMS FOR RAISING
LARGEMOUTH BASS
- 3:45 Robert G. Bartley**
PARTITIONED AQUACULTURE SYSTEMS AN AUSTRALIAN PERSPECTIVE
CULTURING MURRAY COD, SILVER PERCH AND JADE PERCH

- 4:00 John Hargreaves**
COMMERCIAL RECIRCULATING POND SYSTEMS IN LATIN AMERICA
- 4:15 Carole Engle**, Ganesh Kumar
DOES IT MAKE ECONOMIC SENSE TO INTENSIFY PRODUCTION? THE CASE OF SPLIT PONDS AND INCREASED AERATION RATES FOR U.S. CATFISH PRODUCTION
- 4:30 Terry Hanson**, Lisa Bott, Luke Roy, Jesse Chappell
IN-POND RACEWAY CATFISH PRODUCTION AND ECONOMIC ANALYSIS
- 4:45 Jesse A. Chappell**, Terry Hanson, Eric Peatman, Esau Arana, George Fullerton, Lisa Bott, Wilson Holland
DEVELOPMENT OF A FRESH APPROACH TO ON-FARM AQUACULTURE RESEARCH UTILIZING IN-POND RACEWAY TECHNOLOGIES

BIOFOULING

Tuesday, February 23 2:00 - 5:00 Bordeaux

Chairs: Andrew Mount, Gary Dickinson

- 2:00 Andrew Mount**, Vera Bin San Chan
THE GROWING COMPLEXITY OF BARNACLE CYPRID GLUE
- 2:15 Henrik Glenner**, Jens T. Høeg
A COMPARABLE APPROACH TO SETTLEMENT AND ATTACHMENT IN CIRRIPIEDIA
- 2:30 Christopher Spillmann**, Zheng Wang, Dagmar Leary, Jinny Liu, Robert Settlege, Kenan Fears, Stella North, Christopher So, Jenifer Scancellia, Anahita Mostaghim, Tara Essock-Burns, Sarah Haynes, Kathryn Wahl
MOLT-DEPENDENT TRANSCRIPTOMIC ANALYSIS OF ADULT BARNACLE *Amphibalanus amphitrite*
- 2:45 Gary H. Dickinson**, Conall G. McNicholl, Jessica A. Nardone, Kyle R. Siegel, Dana Tedesco, Taliah Khan, Beatriz Orihuela, Daniel Rittschof
ASSESSING THE EFFECTS OF SALINITY AND ACIDIFICATION ON BARNACLE ADHESION, GROWTH AND BIOMINERALIZATION
- 3:00 Jonathan Wilker**, Erik Alberts, Andres Tibabuzo
UNDERSTANDING THE STRUCTURAL AND CHEMICAL BASIS OF OYSTER CEMENTATION
- 3:15 Manuel Figueroa**, Jennifer Schablik, Gary Dickinson
STRUCTURAL EFFECTS OF HYDROPHOBIC COATINGS ON BARNACLE ADHESION
- 3:30 Michael Detty**, Corey Damon, Caitlyn Gatley, John Finlay, Sofia Franco, Tony Clare
TITANIUM-CONTAINING XEROGEL COATINGS AS ANTI-FOULING/FOULING-RELEASE SURFACES USING NATURALLY OCCURRING REAGENTS IN THE SEA
- 3:45 Leslie N. Sturmer**, William White, Kelly Grogan, Shirley Baker
EVALUATION OF BIOCIDES-FREE COATINGS IN REDUCING BIOFOULING ON CULTURE GEAR TO INCREASE HARD CLAM PRODUCTION IN FLORIDA, USA
- 4:00 Gilbert Walker**
ALTERNATIVES TO COPPER TREATMENT OF CAGE NETS FOR SALMON FARMING

- 4:15 Myles Walsh**, Sandra Shumway, Stephan Bullard, Bridget Holohan, Jacob Goodwin, Steven Fisher
DEVELOPMENT OF A NOVEL NON-TOXIC BIOFOULING RELEASE COATING FOR THE AQUACULTURE INDUSTRY
- 4:45 BARNACLE REFERENCE GENOME DISCUSSION**

MACROBRACHIUM

Tuesday, February 23 2:00 - 5:15 Chablis
Chairs: Patricia Moraes Valenti, Michael New

- 2:00 Louis R. D'Abramo**
PARADOX OF FRESHWATER PRAWN *Macrobrachium rosenbergii* FARMING IN THE UNITED STATES: NOTEWORTHY RESEARCH ADVANCES AND COMMERCIAL SUCCESS, BUT STILL AN "EMERGING" AQUACULTURE SPECIES
- 2:30 Shawn Coyle**, Eugene Blair, James Tidwell
TRIALS AND TRIBULATIONS OF LARVICULTURE DEVELOPMENT FOR THE AFRICAN RIVER PRAWN *Macrobrachium vollenhovenii*
- 2:45 William H. Daniels**
ON THE ROAD TO SOLVING THE HIGH MORTALITY IN FRESHWATER PRAWN HATCHERIES IN MYANMAR AND BANGLADESH
- 3:00 Jose Valverde**, Harold Phillips
A CONTRIBUTION TO THE UNDERSTANDING OF HOW TO CULTURE THE NATIVE PRAWN *Macrobrachium carcinus* OF THE CARIBBEAN COAST OF COSTA RICA
- 3:15 Wagner C. Valenti**, Michael B. New
STATUS OF FRESHWATER PRAWN – TILAPIA POLYCULTURE: A REVIEW
- 3:30 Karina Ribeiro**, David Araujo Borges, Janaina da Silva Santos, Eduarda Tayna de Almeida, Francielle Oliveira dos Santos, Emerson Eduardo de Moura, Paulo Mario Carvalho de Faria
RESEARCH DEVELOPED WITH *Macrobrachium* sp. AT THE FEDERAL UNIVERSITY OF RIO GRANDE DO NORTE, BRAZIL
- 3:45 Francisco Parajon**, Harold K. Phillips, Luis Ortiz, Magdiel Castellon, Peter Van Wyk
DEVELOPMENT OF HATCHERY FEEDING PROTOCOLS FOR *Macrobrachium rosenbergii* REPLACING *Artemia* NAUPLII AND TRADITIONAL SUPPLEMENTAL FEEDS WITH COMMERCIAL LIQUID AND DRY MICROPARTICULATE DIETS
- 4:00 Wagner C. Valenti**, Dallas L. Flickinger, Sérgio R. Batlouni, Daniela P. Dantas
FEASIBILITY OF INTEGRATED MULTITROPHIC PRODUCTION OF THE AMAZON RIVER PRAWN AND TAMBAQUI
- 4:15 Dallas Lee Flickinger**, Daniela Pimenta Dantas, Wagner Cotroni Valenti
THE BUDGET OF NITROGEN IN THE CULTURE OF THE AMAZON RIVER PRAWN AND TAMBAQUI FARMED IN MONOCULTURE AND IN INTEGRATED MULTITROPHIC SYSTEMS
- 4:30 Patricia Moraes-Valenti**, Gecirene de Albuquerque Costa
STABLE ISOTOPE ANALYSIS IN AMAZON RIVER PRAWN AND TAMBAQUI FARMED IN DIFFERENT CULTURE SYSTEMS

- 4:45 Karina Ribeiro**, Mariana Cutolo de Araujo, Eduardo Luis Cupertino Ballester, Petronio Coelho Filho
MANAGEMENT TECHNOLOGY FOR THE HATCHERY, NURSERY, AND GROW-OUT PHASES OF FRESHWATER PRAWN SPECIES WITH POTENTIAL IN AQUACULTURE
- 5:00 Amir Sagi**, Assaf Shechter, Ohad Rosen, Brit Eilam, Dudu Azulay
MONOSEX CULTURE OF FRESHWATER PRAWN *M. rosenbergii*

ORNAMENTALS

Tuesday, February 23 2:00 - 5:00 Burgundy
Chair: Qiang (John) Lin

- 2:00 Miguel Mies**
MARINE ORNAMENTAL AQUACULTURE IN BRAZIL: NEED FOR RESEARCH AND INTEGRATION BETWEEN UNIVERSITIES AND BREEDERS
- 2:15 Chatham Callan**
ADVANCES IN YELLOW TANG *Zebrasoma flavescens* CULTURE
- 2:30 Elizabeth Sparks**, Craig Kasper
INCORPORATION OF CITRUS PULP IN DIETS FED TO JUVENILE BUSHY-NOSED PLECO *Ancistrus cirrhosus* AS A LOCAL ALTERNATIVE TO TRADITIONAL FIBROUS CARBOHYDRATE SOURCES
- 2:45 Krystin Damico**, Elizabeth A. Sparks, Craig S. Kasper
FECUNDITY OF AN AFRICAN CICHLID *Pseudotropheus zebra* IS INCREASED AS A RESULT OF INCREASING ENVIRONMENTAL SALINITY
- 3:00 Qiang Lin**
SEAHORSE AND PIPEFISH RESOURCES IN CHINA
- 3:15 Geng Qin**, Liangmin Huang, Qiang Lin
AGGREGATING INTO SHALLOW BAYS FOR BREEDING DURING WARM SEASON AND OVERWINTERING BY LOCAL OFFSHORE MIGRATION IN *Hippocampus mohnikae*
- 3:30 Perla Urquidez-Bejarano**, Mayra L. González-Félix, Martin Perez-Velazquez, Reina Castro-Longoria
GONAD PROXIMATE AND FATTY ACID COMPOSITION, AND STAGES OF GONADAL DEVELOPMENT OF WILD KING ANGELFISH *Holacanthus passer*
- 3:45 Heather Hamlin**, Kathleen Marciano, Craig Downs
TOXICITY OF NONYLPHENOL IN TRANSPORT BAGS FOR MARINE ORNAMENTALS
- 4:00 Yue Liu**, Leticia Torres, Huiping Yang, Terrence Tiersch
ADDRESSING QUALITY CONTROL FOR DEVELOPMENT OF SPERM REPOSITORIES OF PROBLEMATIC FISH SPECIES

FEDERAL TOWN HALL

Tuesday, February 23 2:00 - 5:00 Concorde A

Chair: Betsy Hart

TUESDAY

2:00 This session provides an opportunity for direct dialogue with key aquaculture leaders and managers from diverse federal agencies with the goal of identifying critical issues, problems and/or opportunities for federal agencies to address in partnership with industry in 2016.

Participating Agencies and Representatives:

Dr. Gene Kim

National Program Leader – Aquaculture

Interagency Working Group on Aquaculture (IWG-A) and USDA – National Institute of Food and Agriculture (NIFA)

Dr. Caird Rexroad

National Program Leader – Aquaculture

USDA – Agricultural Research Service (ARS)

Dr. Lee Ann Thomas

Director, Aquaculture, Swine and Avian Health Center

USDA – Animal and Plant Health Inspection Service (APHIS), Veterinary Services

Ms. Barbara Dwyer

Senior Analyst, Office of Policy and Program Development

USDA – Food Safety and Inspection Service (FSIS)

Mr. Bruce Boess

Head, Poultry & Specialty Commodities Section

USDA – National Agricultural Statistics Service (NASS)

Ms. Desiree Morningstar

Regulatory Program Manager

U.S. Army Corps of Engineers (USACE)

Ms. Jenny Molloy

Lead Environmental Protection Specialist, Office of Water, Water Permits Division

U.S. Environmental Protection Agency (EPA)

Mr. David Miko

Division Chief, Fish and Aquatic Conservation

U.S. Fish and Wildlife Service (USFWS)

Mr. Brett Koonse

Consumer Safety Officer

FDA – Center for Food Safety and Applied Nutrition (CFSAN)

Dr. Jennifer Matysczak

Aquaculture Drugs Team Leader, Office of New Animal Drug Evaluation

FDA – Center for Veterinary Medicine (CVM)

Dr. Michael Rubino

Director, Office of Aquaculture

NOAA – Fisheries

WEDNESDAY, February 24

OFFSHORE AQUACULTURE

Wednesday, February 24 8:30 - 10:15 Champagne 2

Chair: Scott Lindell

- 8:30 Susan M. Bunsick**
AN EMERGING ROADMAP FOR NAVIGATING THE REGULATORY ENVIRONMENT FOR OFFSHORE AQUACULTURE IN THE UNITED STATES
- 8:45 Neil Anthony Sims**, Gavin Key
THE OCEAN STEWARDS, THE KEYSTONE XL PIPELINE, AND AMERICA'S INFATUATION WITH BEEF
- 9:00 Langley Gace**
RECENT ADVANCES IN SUBMERGED OPEN OCEAN AQUACULTURE
- 9:15 Diane Windham**
OPPORTUNITIES AND CHALLENGES FOR OFFSHORE AQUACULTURE IN SOUTHERN CALIFORNIA
- 9:30 Kelly Stromberg**
CATALINA SEA RANCH – AN INNOVATIVE WAY TO GROW AND MONITOR SHELLFISH
- 9:45 Scott Lindell**, David Bailey
WHAT WE CAN LEARN FROM ENTANGLEMENT CASES OF WHALES AND TURTLES IN MUSSEL FARMING GEAR
- 10:00 Carol Price**, Ellen Keane, David Morin, Christine Vaccaro, David Bean, James Morris Jr.
PROTECTED SPECIES AND LONGLINE MUSSEL AQUACULTURE INTERACTIONS

CRUSTACEANS - CONTINUED

Wednesday, February 24 8:30 - 10:00 Loire

Chair: Brad Stevens

- 8:30 Stephanie Martinez-Rivera**, Bradley G. Stevens
SIZE AT SEXUAL MATURITY IN THE FEMALE RED DEEP-SEA CRAB *Chaceon quinquedens* IN THE MID-ATLANTIC BIGHT
- 8:45 Shadaesha Green**, J. Sook Chung
CRUSTACEAN HYPERGLYCEMIC HORMONE OF THE RED DEEPSEA CRAB *Chaceon quinquedens* IDENTIFICATION AND ITS POTENTIAL ROLE AS A REPRODUCTIVE REGULATOR
- 9:00 Justin Wilson**, Stevens Bradley
AGE DETERMINATION OF RED DEEP-SEA CRAB *Chaceon quinquedens* BY GROWTH RING ANALYSIS

ORGANIC AQUACULTURE

Wednesday, February 24 8:30 - 10:00 Concorde B

Chair: George Lockwood

- 8:30 George Lockwood**
DEVELOPMENTS IN ORGANIC AQUACULTURE IN THE U.S. WITH EXPLANATION OF THE USDA PROPOSED FINAL RULE FOR ORGANIC AQUACULTURE
- 9:00 Carl Salamone**
CONSUMER DEMAND FOR ORGANIC AQUACULTURE PRODUCTS

SHRIMP NUTRITION

Wednesday, February 24 8:30 - 12:30 Champagne 1

Chairs: Luke Roy, Alberto Nunes

- 8:30 Craig L. Browdy**
THE PROMISE OF NEW AQUAFEED AND FEEDING TECHNOLOGIES
- 9:00 Kenneth Thompson**, Kristy Allen, Benjamin Bowman, Vaun Cummins, Keith Filer, James Tidwell, Andrew Ray, Vikas Kumar
OPTIMIZING THE USE OF ALGAL MEAL *Schizochytrium* sp. AS A FISH OIL REPLACER IN THE PRACTICAL DIETS OF PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 9:15 Kenneth Thompson**, Kristy Allen, Benjamin Bowman, Vaun Cummins, Keith Filer, James Tidwell, Andrew Ray, Vikas Kumar
AN EVALUATION OF THE COMPLETE REPLACEMENT OF FISH OIL WITH ALGAE MEAL *Schizochytrium* sp. IN FISHMEAL-FREE DIETS FOR PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 9:30 Vikas Kumar**, Kristy M. Allen, Kenneth R. Thompson, Benjamin A. Bowman, Vaun C. Cummins, Keith Filer, Amit K. Sinha, James H. Tidwell
PHYSIOLOGY AND GENE BASED COMPARATIVE EVALUATION OF OMEGA-3 RICH ALGAL MEAL IN PLANT PROTEIN AND FISH MEAL DIETS FOR PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 9:45 D. Allen Davis**, Yangen Zhou
IMPROVED HIGH SOY SHRIMP FEEDS FOR THE PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 10:00 BREAK**
- 10:30 D. Allen Davis**, Yangen Zhou, Ramasamy Thirumurugan, Qingkui Wang, Chong M. Lee
USE OF DRY HYDROLYSATE FROM SQUID AND SCALLOP PRODUCTS IN PLANT BASED DIETS FOR PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 10:45 Fabio Soller**, Luis Alejandro Daqui
THE REAL WORLD ANSWER TO THE INVESTMENT ON EMPYREAL® 75 FOR YOUR SHRIMP PRODUCTION
- 11:00 Andrew Logan**
THE UTILIZATION OF PROFLOC™ AS A FISHMEAL REPLACEMENT IN DIETS FOR PACIFIC WHITE SHRIMP *Litopenaeus vannamei*

WEDNESDAY

- 11:15 Xuan Qiu**, Donald A. Davis
ULVA MEAL AS A SUBSTITUTE FOR FISH MEAL IN PRACTICAL DIETS FOR PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 11:30 Karthik Masagounder**, Claudia Figueiredo Silva
RESPONSES OF SHRIMP TO NOVEL METHIONINE SOURCE IN CLEAR AND GREEN WATER SYSTEMS
- 11:45 Susan Laramore**, Alfred Munoz, Richard Baptiste, Paul Wills, Dennis Hanisak
USE OF IMTA HARVESTED SEAWEED *Ulva lactuca* IN A RAS HETEROTROPHIC SHRIMP BIOFLOC SYSTEM
- 12:00 Mary Jane Apines-Amar**, Karen Grace Andrino-Felarca, Rowena Cadiz, Julnafa Balito, Valeriano Corre, Jr.
FERMENTED COPRA MEAL AS POTENTIAL REPLACEMENT FOR FISH MEAL PROTEIN IN BLACK TIGER SHRIMP *Penaeus monodon* PRACTICAL DIET: EFFECTS ON GROWTH AND FEED EFFICIENCY
- 12:15 Jeongwhui Hong**, Seunghan Lee, Mohammad Moniruzzaman, Jun-Young Bae, Kyung-Hoon Chang, Sungchul C. Bai, Doyoung Kim
EVALUATION OF VEGETABLE PROTEIN BASED INGREDIENTS IN PARTIAL REPLACEMENT OF FISHMEAL ON GROWTH, NON-SPECIFIC IMMUNE RESPONSES, DIGESTIVE ENZYME ACTIVITIES AND NUTRIENT DIGESTIBILITY OF JUVENILE WHITE SHRIMP *Litopenaeus vannamei*
- 12:30 LUNCH**
- 1:30 Vikas Kumar**, Amit Kumar Sinha, James H. Tidwell
METABOLIC IMPLICATIONS OF DIETARY CHOLESTEROL IN SHRIMP
- 2:00 Charles Derby**, Farida Elsayed, Samantha Williams, Cristian Gonzalez, Mina Choe, Anant Bharadwaj, George Chamberlain
BEHAVIORAL ASSAYS DEMONSTRATE HOW KRILL MEAL ENHANCES ATTRACTABILITY AND PALATABILITY OF FEED PELLETS FOR PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 2:15 Charles Derby**, MiNa Choe, Farida Elsayed, Sarah Miller, Samantha Williams, Cristian Gonzalez, Anant Bharadwaj, George Chamberlain
DEVELOPMENT OF FEED ATTRACTANT MIXTURES TO INCREASE CONSUMPTION AND REDUCE WASTE IN HIGH-SOY DIETS FOR PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 2:30 To Pham Thi Ha Van**, D. Allen Davis, Melanie A. Rhodes, Chuck Roe, Shelby Oliver, Terrill R. Hanson
EVALUATION OF THREE FEEDING RATES FOR PACIFIC WHITE SHRIMP *Litopenaeus vannamei* UNDER POND PRODUCTION CONDITIONS
- 2:45 Jake Goodall**, Nicholas Wade, David Merritt, Melony Sellars, Kinam Salee, Greg Coman
THE EFFECTS OF ADDING MICROBIAL BIOMASS TO GROW-OUT AND MATURATION DIETS ON THE REPRODUCTIVE PERFORMANCE OF BLACK TIGER SHRIMP *Penaeus monodon*
- 3:00 Gabriela Gaxiola**, Jorge Gamboa, Gerard Cuzon
PHYSIOLOGICAL ASPECTS LINKED WITH DIETARY FISHMEAL REPLACEMENT FOR *Litopenaeus vannamei*

SEA URCHINS

Wednesday, February 24 8:30 - 12:30 Bordeaux

Chair: Shirley Baker

- 8:30 Yukio Agatsuma**, Hikaru Endo, Ayaka Horikoshi, Msakazu N. Aoki
ABRUPT INCREASE IN POPULATION SIZE OF THE SEA URCHIN *Mesocentrotus nudus* AND KELP DEFORESTATION OFF THE PACIFIC COAST IN NORTHERN MIYAGI AFTER THE 2011 TOHOKU TSUNAMI DISASTER, JAPAN
- 8:45 Libin Zhang**, Yang Pan, Jiamin Sun, Tao Zhang, Hongsheng Yang
MOVEMENT AND FEEDING BEHAVIOR AND PHYSIOLOGY OF SEA CUCUMBER *Apostichopus japonicus*
- 9:00 Hongsheng Yang**, Tao Zhang, Libin Zhang
BIOLOGY AND AQUACULTURE OF SEA CUCUMBER *Apostichopus japonicus*
- 9:15 Shirley Baker**, Ruth Francis-Floyd, Roy Yanong, Jan Landsberg, Nicole Stacy, Debbie Pouders, Tom Waltzek, Yasu Kiryu, John Hunt, Bill Sharp, Roxanna Smolowitz, Greg Beck, Ken Leber, David Vaughn, Martin Moe
DEVELOPMENT OF A HEALTH ASSESSMENT PROTOCOL FOR HATCHERY-REARED LONG-SPINED SEA URCHINS *Diadema antillarum* IN FLORIDA, USA
- 9:30 Marlee Hayes**, Laura E. Heflin, John M. Lawrence, Stephen A. Watts
FEED INTAKE AND SATIETY IN THE SEA URCHIN *Lytechinus variegatus*
- 9:45 Yuan Yuan**, Laura E. Heflin, Mickie L. Powell, Addison L. Lawrence, Stephen A. Watts
MACRONUTRIENT ALLOCATION VARIES WITH DIETARY PROTEIN AND CARBOHYDRATE LEVELS IN THE SEA URCHIN *Lytechinus variegatus*
- 10:00 BREAK**
- 10:30 Diana María Cuesta-Gómez**, M. del Pilar Sánchez-Saavedra
EFFECTS OF THE PROTEIN AND CARBOHYDRATE LEVELS ON GONAD INDEX AND GONAD QUALITY OF ADULT PURPLE SEA URCHIN *Strongylocentrotus purpuratus* FROM BAJA CALIFORNIA, MEXICO
- 10:45 Tazin Fahmi**, Grayson Ostermeyer, Ahmed Mustafa
NUTRACEUTICAL-INDUCED STRESS MODULATION IN SEA URCHINS, REARED IN AQUACULTURE
- 11:00 Karen E. Jensen**, Lacey N. Dennis, Yuan Yuan, J. Christopher Taylor, Robert J. Barry, Mickie L. Powell, Stephen A. Watts
URCHIN EGESTA FORMATION AND COMPOSITION AND ITS TROPHIC ROLE IN A POLY-CULTURE SYSTEM

WEDNESDAY

SHELLFISH GENETICS

Wednesday, February 24 8:30 - 12:30 Burgundy

Chair: Paul Rawson

- 8:30 Jessica Small**, Peter Kube, Stan Allen
ADVANCES IN *C. virginica* BREEDING IN CHESAPEAKE BAY, USA: FROM MASS TO FAMILY-BASED SELECTION
- 8:45 Chris Langdon**, Claudio Melo, Evan Durland, Blaine Schoolfield
GENETICS PARAMETERS FOR PERFORMANCE TRAITS OF THE PACIFIC OYSTER *Crassostrea gigas*
- 9:00 Paul Rawson**, Scott Lindell, Ximing Guo, Inke Sunila
DISEASE-RESISTANCE AND IMPROVED PERFORMANCE FOR GENETICALLY IMPROVED AND CROSS-BRED EASTERN OYSTERS *Crassostrea virginica*: RESULTS FROM A DECADE OF FIELD TRIALS IN NEW ENGLAND
- 9:15 Katherine Hornick**, Louis Plough
TRACKING THE PARENTAL CONTRIBUTION OF THE EASTERN OYSTER *Crassostrea virginica* THROUGHOUT HATCHERY PRODUCTION USING MICROSATELLITE MARKERS
- 9:30 Ximing Guo**, Guodong Wang, Bassem Allam, Carmelo del Castillo, Emmanuelle Pales Espinosa, Arnaud Tanguy, John Kraeuter
IDENTIFICATION OF QPX-RESISTANCE MARKERS BY GENOME-WIDE CANDIDATE-GENE ASSOCIATION STUDY IN THE HARD CLAM
- 10:00 BREAK**
- 10:30 Ming Liu**, Cui Li, Guodong Wang, Ximing Guo
IDENTIFICATION OF DISEASE-RESISTANCE MARKERS BY NEXT-GENERATION SEQUENCING IN THE EASTERN OYSTER
- 10:45 Mark Camara**, Aditya Kesarcodi-Watson, Henry Kaspar, Seiha Yen, Nick King
SELECTIVE BREEDING OF THE PACIFIC OYSTER *Crassostrea gigas* FOR ENHANCED RESILIENCE TO OSTREID HERPESVIRUS-1 MICROVARIANT (OSHV-1 μ -VAR): A QUANTITATIVE GENETIC ANALYSIS OF FIELD TRIALS AND LAB-BASED CHALLENGES
- 11:00 Joana Sousa**, H. Baker, S.K. Allen, Jr.
EVIDENCE FOR MITOTIC INSTABILITY IN TRIPLOID PROGENY OF THE AMERICAN OYSTER *Crassostrea virginica* PRODUCED BY TETRAPLOID \times DIPLOID CROSSES
- 11:15 Huiping Yang**, E Hu, Leticia Torres, Standish K. Allen, Jr., Terrence R. Tiersch
CRYOPRESERVATION OF SPERM FROM TETRAPLOID EASTERN OYSTER *Crassostrea virginica*

WEDNESDAY

FISH WELFARE

Wednesday, February 24 8:30 - 12:30 Concorde C

Chair: Craig Watson

- 8:30 Randy McMillan**
A PRODUCER'S PERSPECTIVE
- 9:00 Don Stevens**
DO YOU BELIEVE THAT FISH CAN FEEL PAIN? AN ACADEMIC PERSPECTIVE
- 9:30 Kathleen Hartman**
THE DIFFERENCE BETWEEN POPULATION AND INDIVIDUAL WELFARE
- 11:00 Craig A. Watson**
HOW FISH BECAME WARM-BLOODED IN THE UNITED STATES

WEDNESDAY

IMSEGI (INTERNATIONAL MARINE SHRIMP ENVIRONMENTAL GENOMICS INITIATIVE): MONITORING ECOSYSTEMS, ANIMALS AND PUBLIC HEALTH

Wednesday, February 24 8:30 - 3:30 Chablis

Chair: Acacia Alcivar-Warren

The IMSEGI session focus is the holistic theme of "ONE HEALTH: Conserving Healthy Ecosystems, to Maintain Healthy Animals, to Protect Human Health long-term".

Ecosystem Health Theme Moderators:

Frank David, Maria Leticia Arena Ortiz, Ana Soto-Rodriguez, Acacia Alcivar-Warren, Chinnaiha Amutha

- 8:30 Acacia Alcivar-Warren**
INTRODUCTION / WELCOME – Johnny Castro Montealegre Awards: Recognition to Students (27), Researchers (Bruno-Gomez-Gil) & Industry (Ocean Farms, small businesses)
- 8:45 Sofia Figueroa Zambrano**, Acacia Alcivar-Warren, Miriam Alcivar Arteaga, Diego Alejandro Tigrero, Gober Asuncion, Oscar Jaen, Christian Saltos, Daniela Espinoza, Christian Alcivar Navarrete, Mayra Galindo, Jorge Echevarria Flores, Carlos Zamora, Fermin Saavedra Cano, Jorge Echevarria Velasquez, Sonia Soto-Rodriguez, Bruno Gomez-Gil, Raquel Silveira Coffigny, Gilma Delgado Miranda, Gustavo Arencibia Carballo, Marisela Hernandez Ceballos, Chinnaiha Amutha, Periasamy Subramanian, Dang Thi Hoang Oanh, Chika F Ikeogu, Ebinimi Joe Ansa, Charity Ifeyinwa Nsofor, Robert Bogden, Amy Mraz
THE MANGROVE EPIGENOME (mangroveENCODE) PROJECT: DEVELOPING TECHNOLOGIES FOR ASSESSMENT OF CO₂, THE MICROBIOME, AND ENDOCRINE-DISRUPTING CHEMICALS (GLYPHOSATE, METALS) OF MANGROVES SEDIMENTS FOR CONSERVATION OF SELECTED MANGROVE HABITATS- A PILOT PROJECT
- 9:00 Frank David**, Pierre Taillardat, Cyril Marchand, Nathalie Molnar, Tarik Meziane
MANGROVE ECOSYSTEMS AND SHRIMP FARMING INTERACTIONS ALONG TROPICAL COASTLINES; A PHYSICAL AND CHEMICAL ASSESSMENT

9:15 Acacia Alcivar-Warren, Sofia Figueroa Zambrano, Diego Alejandro Tigrero, Miriam Alcivar Arteaga, , Mayra Galindo, Gober Asuncion, Christian Alberto Alcivar Navarrete
MICROCEPHALY, ZIKA VIRUS, GMO MOSQUITOS, AND *Bacillus thuringiensis* cry1 TOXINS USED FOR MOSQUITO CONTROL (ALSO ASSOCIATED WITH AHPND/EMS-CAUSING *Vibrio parahaemolyticus*) – BASIC RESEARCH NEEDED

9:30 Maria Leticia Arena Ortíz, Xavier Chiappa-Carrara, Javier Apodca Hernandez, Ernesto Perez Rueda
MICROBIAL DIVERSITY IN WETLANDS OF SISAL, YUCATAN, MEXICO

10:00 BREAK

Ecosystem and Animal Health Themes Moderators:

Sonia Soto-Rodriguez, Chinnaiah Amutha, Acacia Alcivar-Warren, Maria Leticia Arena Ortiz, Marisela Hernandez

10:30 María Leticia Arena Ortíz, Liliana Castro Cubillos, Valeria Souza
TAXONOMIC RICHNESS IN THE MICROBIOMA OF THE PACIFIC WHITELEG SHRIMP *Litopenaeus vannamei* IN DIFFERENT DEVELOPMENTAL STAGES (A DDGE-GUIDED VISION)

10:45 Cynthia Saloma, Edgar Amar, Leobert dela Pena
PHILIPPINE PATHOGENOMICS INITIATIVE REVEALS COUNTRYWIDE SITES OF VIBRIOSIS AND AHPND OUTBREAKS IN 2014-2015 AND IDENTIFIES NEW BACTERIAL ISOLATES AFFECTING LOCAL *P. monodon* AND *P. vannamei* IN AQUACULTURE SHRIMP FARMS

11:15 Bruno Gomez-Gil, Sonia Soto-Rodriguez, Miguel Betancourt-Lozano, Ana L. Vargas-Aguilar, Julissa Enciso-Ibarra
GENOMIC COMPARISON OF *Vibrio* STRAINS RESPONSIBLE FOR AHPND/EMS OF SHRIMPS

11:45 Subha Bhassu, Tahereh Ali Nejad, Rofina Yasmin Othman
INSIGHTS ON HOW NATURAL SELECTION DRIVES FRESHWATER PRAWNS TO DEVELOP RESISTANCE AND SURVIVES TOWARDS IHNV INFECTION

12:15 Damir Hernandez Martinez, Acacia Alcivar-Warren, Weidong Bao, Anna Perez Beloborodova, Raquel Silveira Coffigny
INFECTIOUS IHNV OF PENAEID SHRIMP - POTENTIAL ASSOCIATION WITH SLOW GROWTH (RUNT DEFORMITY SYNDROME-LIKE) AND THE NON-LTR RETROTRANSPOSON RTE-3_LVa

12:30 LUNCH

Animal and Human Health Themes Moderators:

Sonia Soto-Rodriguez, Chinnaiah Amutha, Acacia Alcivar-Warren, Maria Leticia Arena Ortiz, Marisela Hernandez

1:30 Acacia Alcivar-Warren
EPIGENETICS 101 – CONSIDERATIONS FOR AQUACULTURE BREEDING PROGRAMS

- 1:45 Rungnapa Leelatanawit**, Nitsara Karoonuthaisiri, Umaporn Uawisetwathana, Somjai Wongtripop
MOLECULAR MECHANISM OF EYESTALK ABLATION TO ENHANCE REPRODUCTIVE MATURATION IN THE FEMALE BLACK TIGER SHRIMP
- 2:00 Amutha Chinnaiiah**
HORMONAL DISRUPTION IN SHRIMP & TILAPIA CAUSED BY GLYPHOSATE - BIOREMEDIATION EFFORTS
- 2:30 Acacia Alcivar-Warren**
WHOLE GENOME SEQUENCING OF *Pandalus borealis*, SPF *Litopenaeus vannamei*, AND *Penaeus monodon* FROM THE UNITED STATES
- 2:45 Sofia Figueroa Zambrano**, Acacia Alcivar-Warren, Marisela Hernández, Jennifer N. Warren, Miriam Alcivar Arteaga, Diego Alejandro Tigrero, Raquel Silveira, Gilma Delgado, Gustavo
MEETING OF 'THE MANGROVE EPIGENOME (mangroveENCODE) PROJECT COLLABORATORS TO DISCUSS RESEARCH PROTOCOLS, GLYPHOSATE- AND *Bacillus thuringiensis*-FREE AQUACULTURE, AND HEAR MARISELA HERNANDEZ TALK ABOUT "FEASIBILITY OF SMALL-SCALE ORGANIC SHRIMP, *Litopenaeus schmitti*, AQUACULTURE IN CUBA: EFFORTS TO HELP WOMEN FROM THE MANGROVES TO START SMALL BUSINESS IN AQUACULTURE OF LOCAL SPECIES, WHILE HELPING TO CONSERVE BIODIVERSITY" - OPEN TO THE PUBLIC

ECONOMICS AND MARKETING

Wednesday, February 24 8:30 - 4:30 Versailles 3

Chair: Frank Ashe

- 8:30 Bertrand Le Gallic**, Maria Cozzolino, Fabienne Daurès, Ralf Döring, Sophie Girard, Tobias Lasner, Laurent Le Grel, Mike Turenhout, Jarno Virtanen
ASSESSING THE EFFECTS OF REGULATORY MEASURES ON THE FISHERIES AND AQUACULTURE SECTORS: THE SUCCESS APPROACH
- 8:45 Tonje C. Osmundsen**, Petter Almklov, Ragnar Tveterås
FISH FARMERS AND PUBLIC SERVANTS COPING WITH THE WICKEDNESS OF AQUACULTURE
- 9:00 Jonathan van Senten**, Carole Engle
COSTS OF THE U.S. REGULATORY ENVIRONMENT ON BAITFISH AND SPORTFISH AQUACULTURE
- 9:15 Frank Ashe**
THE COST OF AN OUTBREAK OF PANCREAS DISEASE FOR SALMON
- 9:30 Kristin H. Roll**
INSURANCE AND MORAL HAZARD IN SALMON AQUACULTURE
- 10:00 BREAK**
- 10:30 Siddhartha Dasgupta**, Benjamin Bowman, Kristy Allen, Kenneth Thompson
AN ECONOMIC ANALYSIS OF SMALL-SCALE HATCHERY AND NURSERY OF THE AUSTRALIAN RED CLAW CRAYFISH *Cherax quadricarinatus*

- 10:45 Marlon Greensword**, Ronald Malone
COST ANALYSIS OF AN AIRLIFTED POLYGEYSER® RAS TILAPIA PRODUCTION FACILITY
- 11:00 Aile Guttormsen**, Md. Akhtaruzzaman Kahn, Kristin Helen Roll
PRODUCTION RISK OF PANGAS *Pangasius hypophthalmus* FISH FARMING IN BANGLADESH
- 11:15 José L. Fernández Sánchez**, José M. Fernández Polanco, Ladislao Luna Sotorrio, Ignacio Llorente García
FIRM FACTORS AFFECTING PROFIT MARGINS IN THE EUROPEAN AQUACULTURE INDUSTRY: ANALYSIS OF THE PERIOD 2009-2013
- 11:30 Laurence Sombardier**, Gregory P. Barbour
HAWAII OCEAN SCIENCE AND TECHNOLOGY PARK: DEVELOPING AN ECONOMIC ENGINE BASED ON AQUACULTURE AND SUSTAINABILITY
- 11:45 Bernadette Fregene**, Adeyinka Abiona, Bolarin Omonona
DETERMINANTS OF RURAL HOUSEHOLD DEMAND FOR FISH IN COMMUNITIES OF WATER AND NON-WATER BODIES IN OYO STATE, NIGERIA
- 12:00 Madan Mohan Dey**, Prasant Allaka
A REVIEW OF RECENT SEAFOOD DEMAND STUDIES IN DEVELOPED AND DEVELOPING COUNTRIES: IMPLICATIONS FOR AQUACULTURE INDUSTRY
- 12:30 LUNCH**
- 1:30 Morten Heide**, Frank Asche, Finn-Arne Egeness, Geir Sogn-Grundvåg
INCREASED DEMAND FOR SALMON: ENTERING NEW MARKETS
- 1:45 Bernadette Fregene**, Azeez Kareem
FARMED FISH MARKET SEGMENTATION BASED ON CONSUMERS' PERCEPTION, SITUATION AND INFORMATION NEEDS IN LAGOS STATE, NIGERIA
- 2:00 Ursula L. Tveteraas**, Sigbjørn Tveteraas
PRICE TRANSMISSION AND DEMAND GROWTH FOR DIFFERENT PRODUCT FORMS: THE DEMAND FOR SALMON
- 2:15 Jonas Torrissen**, Yuko Onozaka
FOOD LIFESTYLE AS A DETERMINANT FOR CONSUMER SEGMENTS OF SEAFOOD
- 2:30 Kristin Lien**, Ragnar Tveteras
SALMON CONSUMPTION OF HOUSEHOLDS WITH CHILDREN AND PRODUCT INNOVATION
- 2:45 Richard Bryant**, Siddhartha Dasgupta
LOCAL MARKETING OF CATFISH: OPPORTUNITIES FOR FARMERS' MARKET PRODUCER-VENDORS IN KENTUCKY
- 3:00 Ganesh Kumar**, Carole Engle
OPTIMAL INVESTMENT PATHWAYS FOR NEW CATFISH PRODUCTION TECHNOLOGIES
- 3:15 Roy Endre Dahl**
A STUDY OF VOLATILITY IN THE AQUACULTURE MARKET USING VALUE-AT-RISK

- 3:30 Atle Oglend**
CLIMATE CHANGE AND THE SUSTAINABILITY OF NORWEGIAN SALMON
AQUACULTURE
- 3:45 Ruth Pincinato, Frank Asche**
POTENTIAL EFFECTS OF CLIMATE CHANGES ON THE PRICE VOLATILITY OF
SMALL PELAGIC FISH
- 4:00 Daniel V. Gordon**
PRICE MODELLING IN THE CANADIAN FISH SUPPLY CHAIN WITH FORECASTS
AND SIMULATIONS OF THE EX-VESSEL PRICE OF FISH

ZEBRAFISH - CONTINUED

Wednesday, February 24 8:30 - 6:30 Vendome A
Chair: Bobbi Baur

FISH DISEASES – Coordinated by Dr. Michael Kent

- 8:30 Katy Murray**
CONTROL OF PSEUDOLOMA WITHIN ZIRC
- 8:45 Marcus Crim**
WHAT IS OUT THERE IN ZEBRAFISH COLONIES AND HOW DO WE DETECT IT?
- 9:05 Maurício Laterça Martins**
DISINFECTANT STRATEGIES FOR PSEUDOCAPILLARIA
- 9:25 Sean Spagnoli**
INTERACTIONS BETWEEN GAMMA IRRADIATION AND PSEUDOLOMA
NEUROPHILIA INFECTION IN ADULT ZEBRAFISH
- 9:40 Justin Sanders**
CYTOKINE RESPONSES IN ZEBRAFISH WITH CHRONIC INFECTIONS
- 9:55 Michael Kent**
TRANSMISSION STUDIES INDICATE THAT INTESTINAL CANCERS IN ZEBRAFISH
ARE CAUSED BY AN INFECTIOUS AGENT

10:15 BREAK

REGULATORY ISSUES FOR AQUATICS USERS – Coordinated by Monte Matthews

- 10:30 Monte Matthews**
OVERVIEW: REGULATORY ISSUES FOR AQUATICS USERS
- 10:50 Monte Matthews**
REGULATORY AND ADMINISTRATIVE BURDEN
- 11:00 Kathy Snell**
INTRODUCTION TO VETERINARIAN PERSPECTIVE
- 11:10 TBA**
INTRODUCTION TO INVESTIGATOR PERSPECTIVE
- 11:20 Lauren Pandolfo**
INTRODUCTION TO MANAGER PERSPECTIVE

11:30 TBA
INTRODUCTION TO TECHNICIAN PERSPECTIVE

11:40 PANEL ADDRESSES COMMUNITY SUBMITTED ISSUES

12:30 LUNCH

KEYNOTE SPEAKER

1:30 Steve Ekker
CURE MAPPING USING ZEBRAFISH

2:30 Katy Murray
ZIRC'S NEW PROGRAM ON RESTRICTING SUBMISSION OF FISH WITH CERTAIN INFECTIONS

2:50 Carolyn Chang
ZEBRAFISH EMBRYO DISINFECTION WITH POVIDONE IODINE: EVALUATING AN ALTERNATIVE TO CHLORINE BLEACH

3:10 BREAK

3:30 Ana Catarina Certal, Matheus Farias, Sandra Martins
THE CCU FISH PLATFORM: SUPPORTING ZEBRAFISH RESEARCH THROUGH RIGOROUS HUSBANDRY AND HEALTH PROGRAMS, AND BEYOND

3:45 Stephen Watts
FEEDING TO FOOD CONSERVATION RATIO

4:15 Christian Lawrence
THE STATE OF LABORATORY ZEBRAFISH TRANSPORT: FLAWS, CHALLENGES, AND THE PATH TOWARDS A SENSIBLE SOLUTION

4:45 TOWN HALL MEETING

ALTERNATIVE FEEDS DEVELOPMENT

Wednesday, February 24 8:30 - 4:45 Champagne 3

Chair: Ian Forster

8:30 Ian Forster, Briony Campbell, Brad Hicks, Bruce Morton, Mahmoud Rowshandeli
ALTERNATIVE PROTEIN SOURCES FOR JUVENILE SABLEFISH *Anoplopoma fimbria*

8:45 Jack Grushcow
CAMELINA – PRODUCING A SUSTAINABLE HIGH OMEGA SOURCE FOR AQUAFEEDS IN NORTH AMERICA

9:00 James Schwartz, Jayme Yee, David Baston, Rafael Cuevas Uribe
EVALUATING EFFECTS OF FISH OIL REPLACEMENT WITH ALGAL OIL *Schizochytrium* sp. IN THE DIET OF *Oncorhynchus mykiss*

9:15 Olaitan O. Olajuyigbe, Obasola E. Fagade
FERMENTATION OF SHRIMP *Penaeus notialis* WASTE FOR USE AS SUPPLEMENT IN FISHFEED FORMULATION

- 9:30 Seong-hun Won**, Seunghan Lee, Mohammad Moniruzzaman, Jun-Young Bae, Kyung-Hoon Chang, Sungchul C. Bai
EVALUATION OF VEGETABLE PROTEIN BASED INGREDIENTS AS A FISH MEAL REPLACER IN DIETS FOR JUVENILE RAINBOW TROUT *Oncorhynchus mykiss*
- 9:45 Muhammad Ashraf**, Sajid Ali
EFFECT OF *Linum usitatissimum* AND *Sesamum indicum* EXTRACT AS GROWTH PROMOTORS IN DIETS OF FINGERLINGS OF *Ctenopharyngodon idella*
- 10:00 BREAK**
- 10:30 Noor Khan**, Hussain Mehdi
EFFECT OF *Moringa oleifera* MEAL ON THE GROWTH, BODY COMPOSITION AND NUTRIENT DIGESTIBILITY OF *Labeo rohita*
- 10:45 Aaron Watson**, Justin Yost, Dan Bearden, Gibson Gaylord, Frederic Barrows, Paul Anderson, David Moore, Michael Denson
EVALUATION OF SOY PROTEIN'S EFFECTS ON LIPID METABOLISM THROUGH TARGETED QUANTITATIVE PCR IN JUVENILE RED DRUM *Sciaenops ocellatus*
- 11:00 Olukayode Amos Sogbesan**, Taiye Michael Ekundayo
GROWTH AND BIOCHEMICAL EVALUATIONS OF *Clarias gariepinus* (BURCHELL) FED SOLID STATE FERMENTED GROUNDNUT *Arachis hypogea* SHELL SUPPLEMENTED DIETS
- 11:15 Olukayode Amos Sogbesan**, Deborah Oyewumi Oyebamiji
EFFECTS OF REPLACING SOYBEAN MEAL WITH MORINGA LEAF MEAL IN THE DIETS OF *Oreochromis niloticus* (LINN.)
- 11:30 Christianah Olaniyi**, Damilola Adeniyi
EFFECT OF *Moringa oleifera* LEAF MEAL ON REPRODUCTIVE PERFORMANCE (HATCHABILITY, FECUNDITY, SPERM MOTILITY) AND SURVIVAL RATE OF AFRICAN CATFISH
- 11:45 Omolola Betiku**, T. Gaylord, Glenn Duff, Carl Yeoman, Wendy Sealey
INCLUSION OF YEAST WITH/WITHOUT PREBIOTICS IN RAINBOW TROUT *Oncorhynchus mykiss* DIET: PARTICULAR ATTENTION ON 16S rRNA ANALYSIS
- 12:00 Michelle L. Walsh**, Marcel Hatter
MACROALGAE AS AN ENRICHMENT FEED FOR WHITE WORMS *Enchytraeus albidus*
- 12:15 Alexis M. Bergman**, Jesse T. Trushenski, Elizabeth A. Fairchild
CULTIVATION OF WHITE WORMS *Enchytraeus albidus* USING LOW- OR NO-COST FEED RESOURCES
- 12:30 LUNCH**
- 1:30 Elizabeth Fairchild**, Elizabeth Groover
EFFECTS OF FEEDS AND TEMPORAL CYCLES ON WHITE WORM *Enchytraeus albidus* PRODUCTION
- 1:45 Baba Usman Ibrahim**, Saidu Sagri
GROWTH PERFORMANCE OF *Clarias gariepinus* FED ON EARTHWORM *Lumbricus terrestris*

- 2:00 Julie Schroeter**, Qing Pan, Zachariah B. Conley, Scott Snyder, T. Gibson Gaylord, Wendy M. Sealey
APPARENT DIGESTIBILITY COEFFICIENTS OF AQUA-PAK™ ELITE® 70, 65 AND 60, AND PROCISION® FOR RAINBOW TROUT *Oncorhynchus mykiss*
- 2:15 Gavin Key**, Cory Hungate, Thomas Clemente, Steven Weier, Neil Anthony Sims
TRANSLATING FISHMEAL REPLACEMENT RESEARCH INTO A COMMERCIAL-READY SOY-BASED FEED FOR KAMPACHI *Seriola rivoliana*
- 2:30 Chuck Roe**, Melanie Rhodes, Allen Davis, Ha Van To Pham Thi, Terry Hanson, Guillaume Salze
IMPROVING SOY BASED FEED FORMULATIONS FOR THE FLORIDA POMPANO *Trachinotus carolinus* USING NOVEL SOY PROTEIN CONCENTRATE
- 2:45 Chuck Roe**, Melanie Rhodes, Allen Davis, Ha Van To Pham Thi, Terry Hanson, Guillaume Salze
IMPROVING HIGH SOY FEED FORMULATIONS FOR FLORIDA POMPANO *Trachinotus carolinus* THROUGH PHYTASE SUPPLEMENTATION
- 3:00 Adiaha Ugwumba**, Omonike Monebi
GROWTH AND NUTRIENT UTILIZATION OF EARTHWORM MEALS IN THE DIETS OF MUD CATFISH FINGERLINGS
- 3:15 Larry Feinberg**
AN UPDATE ON THE ADVANCEMENT OF A NOVEL SINGLE CELL PROTEIN FOR ALTERNATIVE FEEDS IN AQUACULTURE
- 3:30 Thomas Wedegaertner**
GOSSYPOL FREE COTTONSEED PROTEIN PROVIDES AN OPPORTUNITY TO ENHANCE THE SUSTAINABILITY OF AQUACULTURE BY REPLACING FISH MEAL – A REVIEW
- 3:45 Seunghan Lee**, Hyeonho Yun, Youngjin Park, Seonghun Won, Doyoung Kim
EVALUATION OF THE DIETARY PROBIOTICS ISOLATED FROM GASTRO-INTESTINAL TRACT IN EEL AS THE ANTIBIOTICS REPLACER IN JAPANESE EEL *Anguilla japonica*
- 4:00 Dong-Fang Deng**, Zhi Yong Ju, Cheng Seng Lee, Harry Ako
NUTRITIONAL EVALUATION ON LOCAL FEED INGREDIENTS FOR TILAPIA *O. hornorum* PRODUCTION IN HAWAII
- 4:15 Josh Silverman**
FEEDKIND: AN INNOVATIVE MICROBIAL PROTEIN AS A FISHMEAL REPLACEMENT FOR AQUACULTURE

PHYSIOLOGICAL INSIGHTS TOWARDS IMPROVING FISH CULTURE IV - CONTINUED

Wednesday, February 24 8:30 - 4:45 Versailles 2

Chairs: Kurt Gamperl, Matt Rise, Brian Small, Greg Weber

9:00 Russell Borski, Jonathan D. Douros, David A. Baltzegar, Benjamin J. Reading
FUNCTION OF LEPTIN AS A CARBOHYDRATE CATABOLIC STRESS HORMONE IN FISH: INSIGHTS FROM TRANSCRIPTOMIC AND PHYSIOLOGICAL STUDIES IN THE TILAPIA

9:15 Jamie Mankiewicz, Jordan D. Taylor, Jonathan D. Douros, David A. Baltzegar, Russell J. Borski
LEPTIN REGULATION BY GLUCOSE, CATECHOLAMINES, AND GLUCOCORTICOIDS IN THE TILAPIA AND ITS IMPLICATIONS TO THE VERTEBRATE STRESS RESPONSE

9:30 Matt Vijayan, Anju Philip
STRESS-IMMUNE-GROWTH INTERACTIONS IN RAINBOW TROUT: A ROLE FOR SUPPRESSORS OF CYTOKINE SIGNALING (SOCS)

10:00 BREAK

Fish Growth and Nutrition

Moderator: Brian Small

10:30 Ronald Hardy, Andreas Brezas
BEYOND FEEDING AND WEIGHING: UTILIZING PHYSIOLOGICAL APPROACHES IN FISH NUTRITION RESEARCH

11:00 Paul Brown, Liu Bo, Amin Wang
EPIGENETICS: WHERE NATURE AND NURTURE COLLIDE

11:15 Helgi Thorarensen, Godfrey Kubiriza, Albert K. Imsland
EXPERIMENTAL DESIGN AND STATISTICAL POWER OF FISH GROWTH STUDIES

11:30 Ross Reid, Jacob Michael Froehlich, Peggy Biga
NOVEL INSIGHTS INTO MYOGENIC PRECURSOR CELL PHENOTYPES USING COMPARATIVE *IN VITRO* ANALYSES

11:45 Peggy Biga, Jacob Michael Froehlich, Mary Latimer, Iban Seiliez, Jean-Charles Gabillard
MODELING ATROPHY THROUGH FASTING IN AN *IN VITRO* SYSTEM REVEALS POSSIBLE CELLULAR SELF-RENEWAL

12:00 Beth Cleveland, Gregory Weber
EFFECTS OF SEXUAL MATURATION AND 17 β -ESTRADIOL ON NUTRIENT PARTITIONING AND MECHANISMS REGULATING GROWTH AND NUTRIENT METABOLISM IN RAINBOW TROUT *Oncorhynchus mykiss*

12:15 Brian Small, Julie Schroeter, Brian Peterson, Menghe Li
NPY FAMILY GENES RESPOND NEGATIVELY TO ALTERNATIVE FEEDSTUFFS IN CHANNEL CATFISH DIETS

12:30 LUNCH

WEDNESDAY

- 1:30 Yass Kobayashi**, Alexyss Leiker, Brianna Teel
HEPATIC CHANGES IN THE EXPRESSION OF GLUCOSE TRANSPORTER (GLUT) 1 AND 2 AND TWO INSULIN RECEPTOR (IR) MRNA IN RESPONSE TO FOOD INTAKE IN CHANNEL CATFISH
- 1:45 Jacob Bledsoe**, Brian C. Peterson, Kelly S. Swanson, Brian C. Small
EVALUATING DIFFERENCES IN THE HOMEOSTATIC INTESTINAL MICROBIOME BETWEEN SELECTED STRAINS OF CHANNEL CATFISH *Ictalurus punctatus* AND BLUE CATFISH *Ictalurus furcatus*
- 2:00 Ken Overturf**, Andreas Brezas, Jason Abernathy, Ronald Hardy
INTERACTIVE EFFECTS OF DIET AND TROUT STRAIN ON THE GUT MICROBIOME OF RAINBOW TROUT
- 2:15 Daniel Bearden**, Fabio Casu, Aaron Watson, Justin Yost, John Leffler, Gibson Gaylord, Frederic Barrows, Paul Sandifer, Michael Denson
METABOLOMICS ANALYSIS OF EFFECTS OF FEEDS WITH VARYING SOY CONCENTRATION IN RED DRUM *Sciaenops ocellatus*

Fish Health and Disease

Moderator: Matt Rise

- 2:30 Brian Dixon**
ANTIGEN PRESENTATION AND AQUACULTURE: WHY STUDYING MAJOR HISTOCOMPATIBILITY GENE FUNCTION CAN LEAD TO ENHANCED FISH HEALTH
- 3:00 Shawna L. Semple**, Nguyen T.K. Vo, Lowia Al-Hussinee, Niels Bols, John Lumsden, Brian Dixon
UNCOVERING THE IMMUNOLOGICAL INTERACTIONS BETWEEN RAINBOW TROUT *Oncorhynchus mykiss* AND THE COLDWATER PATHOGEN *Flavobacterium psychrophilum*
- 3:15 Tiago Hori**, Eva Jakob, Fred Kibenge, Molly Kibenge, Simon Jones, Jennifer Hall, Matthew Rise
MICROARRAY ANALYSIS OF THE RESPONSE OF ATLANTIC SALMON *Salmo salar* PRIMARY HEAD KIDNEY MACROPHAGE CULTURES TO INFECTION WITH *Piscirickettsia salmonis*
- 3:30 Wendy Olson**, Frederick Goetz, Graham Young
ONTOGENY OF THE IMMUNE SYSTEM IN THE SABLEFISH *Anoploma fimbria* – IMPLICATIONS FOR VACCINE STRATEGIES
- 3:45 Marije Booman**, Simon R.M. Jones, Katie L. Satchwell, Stephen A. Cochrane, Christopher T. Lohans, Brandon Findlay, Marco J. van Belkum, Lynn M. McMullen, John C. Vederas
ACTIVITY OF PROBIOTIC *Paenibacillus* BACTERIA AND THEIR ANTIMICROBIALS AGAINST SALMON PATHOGENS
- 4:00 Peter Allen**, Erin Brinkman, Wes Baumgartner, Rob DeVries, Heather Stewart, Daniel Aboagye, Shane Ramee, Michael Ciaramella, Lora Petrie-Hanson
FIN HEALING FOLLOWING INJURY OR SAMPLING
- 4:15 Marije Booman**, Qingheng Xu, Matthew L. Rise
THE EFFECT OF *Camelina sativa*-BASED DIETS ON THE IMMUNE GENE EXPRESSION IN ATLANTIC COD AND ATLANTIC SALMON

- 4:30 Matthew Rise**, Xi Xue, Tyler Brown, Tiago Hori, Marije Booman, Stefanie Hixson, Chang Lin Ye, Christopher Parrish, Derek Anderson
INFLUENCE OF CAMELINA BASED DIETS ON THE ATLANTIC SALMON LIVER AND DISTAL INTESTINE TRANSCRIPTOMES

AQUACULTURE-BASED FISHERIES CONSERVATION AND ENHANCEMENTS

Wednesday, February 24 8:30 - 4:30 Concorde A
Chairs: Mike Denson, Peter Kingsley-Smith

- 8:30 Michael Denson, Karl Brenkert, Tanya Darden**
RED DRUM STOCK ENHANCEMENT IN SOUTH CAROLINA: A 20 YEAR PERSPECTIVE
- 9:00 Mark Drawbridge**, Michael Shane
A STATUS REPORT ON CALIFORNIA'S OCEAN RESOURCES ENHANCEMENT AND HATCHERY PROGRAM
- 9:15 Matthew T. Perkinson**, Tanya L. Darden, Karl Brenkert IV, Michael R. Denson
CONTRIBUTION AND MOVEMENT OF HATCHERY-PRODUCED RED DRUM *Sciaenops ocellatus* STOCKED IN TWO SOUTH CAROLINA ESTUARIES
- 9:30 Ken Leber**, William Halstead, Nathan Brennan, Michael Tringali, Chris Young, Ed Camp, Taryn Garlock, Kai Lorenzen
EVOLUTION OF MARINE STOCK ENHANCEMENT IN FLORIDA, USA
- 9:45 Karl Brenkert**, Tanya Darden, Michael R. Denson, Tim O'Donnell
EXPERIMENTAL STOCKING OF HATCHERY-REARED SPOTTED SEATROUT *Cynoscion nebulosus* IN THE CHARLESTON HARBOR ESTUARY 2012-2014
- 10:00 BREAK**
- 10:30 Steve Lochmann**, Greyson F. Farris
REVIEWS OF STOCK ENHANCEMENTS OF LARGEMOUTH BASS AND CRAPPIES WITH CONSIDERATION OF FACTORS AFFECTING STOCK ENHANCEMENT SUCCESS
- 10:45 James Barron**, Ronald Twibell, Ann Gannam, Kyle Hanson
EFFECTS OF TIMING OF FIRST FEEDING ON GROWTH AND SURVIVAL OF CULTURED PACIFIC LAMPREY *Entosphenus tridentatus* LARVAE
- 11:00 Constance Silbernagel**, Michael Shane, Mark Drawbridge
QUALITY CONSIDERATIONS AND SURVEILLANCE IN MARINE STOCKING PROGRAMS
- 11:15 Brian Beckman**, Dina Spangenberg, Ryan Gerstenberger, Deb Harstad, Chris Brun, Shelly Nance, Don Larsen
EFFECT OF PRE-RELEASE GROWTH TRAJECTORIES ON ADULT MATURATION PATTERNS IN COLUMBIA RIVER SPRING CHINOOK SALMON
- 11:30 Corey N. Clarke**, Dylan J. Fraser, Craig F. Purchase
EFFECTS OF CONSERVATION REARING STRATEGIES ON LIFE-LONG FITNESS FOR INNER BAY OF FUNDY ATLANTIC SALMON *Salmo salar*

- 11:45 Tom Flagg**, Paul Kline
PUTTING THE RED BACK IN REDFISH LAKE – TWENTY YEARS OF CAPTIVE BROODSTOCK PROGRESS TOWARDS SAVING THE PACIFIC NORTHWEST'S MOST ENDANGERED POPULATION OF SALMON
- 12:00 Paul Kline**, Thomas Flagg
IMPLEMENTATION OF BROODSTOCK MANAGEMENT SCENARIOS FOR CONSERVATION AND HARVEST – IDAHO CASE EXAMPLE
- 12:15 Heather Stewart**, David Noakes, Carl Schreck
FINDING YOUR WILD SIDE: PRODUCTION OF WILD-LIKE SALMONIDS
- 1:30 Tanya L. Darden**, Michael R. Denson
INCORPORATING POPULATION GENETICS INTO STOCK ENHANCEMENT PROGRAMS
- 12:30 LUNCH**
- 2:00 Christopher Mealey**, Tanya Darden, John Robinson, Michael R. Denson
USING AN INDIVIDUAL-BASED MODEL TO PREDICT THE GENETIC IMPACTS OF STOCK ENHANCEMENT OF RED DRUM IN SOUTH CAROLINA
- 2:15 Rigoberto Delgado-Vega**, Fabiola Lafarga-de La Cruz, Francisco J. García-de León, Carmen G. Paniagua-Chávez, Miguel Ángel del Río-Portilla
DEVELOPMENT OF MOLECULAR MARKERS AND GENETIC DIVERSITY OF SAN PEDRO MÁRTIR TROUT *Oncorhynchus mykiss nelsoni*
- 2:30 Daniel Schill**, Jeff Heindel, Matthew Campbell, Kevin Meyer, Elizabeth Mamer
PRODUCTION OF A YY MALE BROOK TROUT BROODSTOCK FOR POTENTIAL ERADICATION OF UNDESIRED BROOK TROUT POPULATIONS
- 2:45 Leticia Torres**, Terrence R. Tiersch
USING AMINE REACTIVE DYES TO ESTIMATE MEMBRANE INTEGRITY IN FIXED FISH SPERM: A TOOL TO STRENGTHEN THE QUALITY CONTROL OF CRYOPRESERVATION PROTOCOLS
- 3:00 Matthew Gray**, Philine zu Ermgassen, Emily Lemagie, Jon Gair, Jim Lerczak, Chris Langdon
IMPROVED RESOLUTION OF FILTRATION SERVICES FROM OCEANOGRAPHIC AND PHYSIOLOGICAL STUDIES OF THE NATIVE OLYMPIA OYSTER *Ostrea lurida* AND THE INTRODUCED PACIFIC OYSTER *Crassostrea gigas*
- 3:15 Stephen Geiger**, Sarah Stephenson
INCREASED REGIONAL STABILITY OF BAY SCALLOPS *Argopecten irradians* IN SOUTHWEST FLORIDA
- 3:30 Kathryn E. Lohr**, Joshua T. Patterson
INTRASPECIFIC VARIATION IN PHENOTYPE AMONG NURSERY-REARED STAGHORN CORAL *Acropora cervicornis*
- 3:45 Donna Snellgrove**, Tim O'Brine
CORAL REEF REHABILITATION PROGRAM IN INDONESIA
- 4:00 Ramjie Odin**, Delfin C. Papa, Danilo S. Josue, Luminog M. Nur
THE MINDANAO STATE UNIVERSITY – MAGUINDANAO DEVELOPMENT PROGRAM TO RESTORE AQUASILVICULTURE FARMS AND MANGROVES

GENETIC ENGINEERING IN AQUACULTURE

Wednesday, February 24 8:30 - 3:00 Vendome B

Chairs: Yoni Zohar, John Buchanan, Dave Conley

- 8:30 John T. Buchanan**
HISTORY OF GENETIC ENGINEERING IN AQUACULTURE
- 8:45 Ronald L. Stotish**
AquAdvantage SALMON, SCIENCE AND SOCIETY
- 9:15 Dave Conley**
AQUABOUTY'S COMMUNICATION CHALLENGE – TURNING FEAR INTO TRUST
- 9:30 Reginal M. Harrell**
BIOETHICAL CONSIDERATIONS OF GENETIC ENGINEERING FOR AQUACULTURE
- 9:45 Debbie Plouffe**, Dawn Runighan, John Buchanan
BROODSTOCK SELECTION FOR IMPROVED GROWTH PERFORMANCE OF TRIPLOID, GROWTH HORMONE TRANSGENIC ATLANTIC SALMON
- 10:00 BREAK**
- 10:30 Rachid Ganga**, Alex Peters, Matthew Bryenton, Dawn Runighan, Debbie Plouffe, John Buchanan
OPTIMIZED FEED TO IMPROVE GROWTH AND WELFARE OF TRIPLOID GROWTH HORMONE TRANSGENIC ATLANTIC SALMON *Salmo salar*
- 10:45 Berta Levavi-Sivan**, Naama Mizrahi, Yaron Cohen, Matan Golan
PRODUCTION OF TRANSGENIC TILAPIA WITH GROWTH ENHANCEMENT
- 11:00 Nermeen Y. Abass**, Rex Dunham
TRANSGENIC GROWTH HORMONE (GH) CHANNEL CATFISH: BETWEEN DREAM AND REALITY
- 11:15 Nermeen Y. Abass**, Rex Dunham
COMPARISON OF GROWTH RATE AMONG CHANNEL CATFISH *I. punctatus* ♀ × BLUE CATFISH *I. furcatus* ♂ HYBRID, CHANNEL CATFISH, AND TRANSGENIC CHANNEL CATFISH BY cDNA GROWTH HORMONE (GH) CHANNEL CATFISH
- 11:30 Rosalind A. Leggatt**, Robert H. Devlin
IDENTIFYING UNCERTAINTY IN ASSESSING FITNESS COMPONENTS OF GROWTH HORMONE TRANSGENIC COHO SALMON: A MARINE EXAMPLE
- 11:45 Raman Sood**, Blake Carrington, Kevin Bishop, Gaurav Varshney, MaryPat Jones, Shawn Burgess, Paul Liu
USE OF GENOME-EDITING NUCLEASES, PARTICULARLY CRISPR/CAS9 FOR HIGH THROUGHPUT MUTAGENESIS IN ZEBRAFISH
- 12:00 Anna Wargelius**, Fernando Ayllon, Erik Kjærner-Semb, Sven Leininger, Lene Kleppe, Kai Ove Skaftnesmo, Tomasz Furmanek, Vidar Wennevik, Monica F. Solberg, Geir Dahle, Kevin A. Glover, Markus Sellman-Almen, Carl Johan Rubin, Geir Lasse Taranger, Rüdiger W. Schulz, Helge Tveiten, Geir Lasse Taranger, Eva Andersson, Rolf B. Edvardsen
GWAS AND FUNCTIONAL STUDIES REVEAL GENETICS BEHIND REPRODUCTIVE TRAITS IN ATLANTIC SALMON *Salmo salar* L.

12:30 LUNCH

- 1:30 Yonathan Zohar**, Olivia Spicer, Miranda Marvel, Nilli Zmora, Ten-Tsao Wong
ELIMINATING REPRODUCTIVE GENES: A GOOD APPROACH TO STERILITY IN FISH?
- 2:00 Ten-Tsao Wong**, Yonathan Zohar
A NOVEL APPROACH TO GENETIC-CONTAINMENT: PRODUCING STERILE FISH BY DISRUPTING PRIMORDIAL GERM CELL DEVELOPMENT
- 2:15 Xavier Lauth**, E Hu, Tuong Tran, Takeshi Umazume, John Buchanan, Ronald Stotish
MATERNALLY-INDUCED STERILITY IN FISH
- 2:30 Rex A. Dunham**
GENE TRANSFER AND GENE EDITING FOR REVERSIBLE STERILIZATION OF CATFISH
- 2:45 Shaojun Liu**
THE GENERATION OF THE FERTILE DIPLOID AND TETRAPLOID FISH LINAGES DERIVED FROM DISTANT HYBRIDIZATION

MUSSELS

Wednesday, February 24 10:30 - 12:30 Loire
Chair: Rebecca Smith

- 10:30 Scott Lindell**, David Bailey
HATCHERY TECHNOLOGY DEVELOPMENTS TO SUPPORT FARMING NORTHEASTERN U.S. BLUE MUSSELS *Mytilus edulis*
- 10:45 Rebecca Smith**, Andrew Jeffs
ASSESSING THE COMMERCIAL POTENTIAL OF SPAT COLLECTION OF GREENSHELL™ MUSSELS IN THE HAURAKI GULF, NEW ZEALAND
- 11:00 Lewis E. Deaton**
EFFECTS OF BIOGENIC AMINES ON THE ISOLATED VENTRICLE OF THE ATLANTIC RIBBED MUSSEL *Geukensia demissa*
- 11:15 Norman L.C. Ragg**, Zoë Hilton, Ellie Watts, Jolene Taylor, Jonathan Morrish, Kevin Heasman, Nick King
ENERGETICS PARAMETERS APPLIED TO FAMILY SELECTION IN A GREENSHELL MUSSEL *Perna canaliculus* BREEDING PROGRAMME

IMTA AND INTEGRATED AQUACULTURE

Wednesday, February 24 10:30 - 4:30 Champagne 2

Chairs: Shawn Robinson, Thierry Chopin

10:30 **Thierry Chopin**

THE CANADIAN INTEGRATED MULTI-TROPHIC AQUACULTURE NETWORK (CIMTAN): 2010-2016 – WHAT HAVE WE LEARNED?

11:00 **Shawn Robinson, Keng Pee Ang, Gregor Reid, Andrew Cooper, Terralynn Lander, Bruce MacDonald, Hannah Bradford, Kurt Simmons, Emily Nelson, Taryn Minch, Thierry Chopin**

EVALUATION OF THE VARIOUS ORGANIC NICHES IN INTEGRATED MULTI-TROPHIC AQUACULTURE (IMTA) FROM THE CANADIAN EAST COAST

11:15 **Bruce MacDonald, Shawn M.C. Robinson, Christopher M. Pearce, Kurt Simmons, Emily J. Nelson, Gregor K. Reid, Daniel L. Curtis, Lindsay C. Orr, Lucie Hannah, Helen Gurney-Smith, Stephen F. Cross**

ASSESSING THE SUITABILITY OF SUSPENSION- AND DEPOSIT-FEEDING SEA CUCUMBERS AS EXTRACTORS OF PARTICULATES IN INTEGRATED MULTI-TROPHIC AQUACULTURE (IMTA)

11:30 **Angela Fortune, Christopher M. Pearce, Mica Verbrugge, Stephen F. Cross**

INTEGRATED MULTI-TROPHIC AQUACULTURE (IMTA) WITH THE CALIFORNIA SEA CUCUMBER *Parastichopus californicus*: UTILIZING ANIMAL BEHAVIOUR AND CAGE DESIGN TO OPTIMIZE IMTA SYSTEM EFFICIENCY

11:45 **Stacy Murray, Thierry Chopin, Hamid Khoda Bakhsh, Miko Leavitt**

FRESHWATER INTEGRATED MULTI-TROPHIC AQUACULTURE (FIMTA): DEVELOPING AQUAPONICS FOR COLD TEMPERATE COMMERCIAL ATLANTIC SALMON *Salmo salar* HATCHERY SYSTEMS AND INVESTIGATING THE USE OF IMTA KELP BIOCHAR AS A PLANT SUBSTRATE

12:00 **Adam Turner, Tiger Jeans, Gregor Reid**

EXPERIMENTAL INVESTIGATION OF CANADIAN FISH FARM HYDRODYNAMIC WAKE PROPERTIES AND ITS IMPLICATIONS FOR INTEGRATED MULTI-TROPHIC AQUACULTURE (IMTA)

12:15 **Taryn Minch, Shawn M.C. Robinson, Bruce MacDonald, Gregor Reid, Keng P. Ang**

HIGH RESOLUTION MEASURES OF CURRENT FLOWS AROUND SALMON CAGES TO GUIDE THE PLACEMENT OF EXTRACTIVE SPECIES FOR INTEGRATED MULTI-TROPHIC AQUACULTURE

12:30 **LUNCH**

1:30 **H. Ayouqi, D. Knowler, W. Haider, G. K. Reid, W. Yip, K. Irwin, P. Kitchen**

ECONOMICS OF INTEGRATED MULTI-TROPHIC AQUACULTURE ADOPTION IN CANADA: AN OVERVIEW

1:45 **Erin Latham, M. Flaherty, S. Cross, C. Pearce, T. Chopin**

MAKING LINKAGES: EXPLORING THE FUTURE OF AQUACULTURE AND THE POTENTIAL OF INTEGRATED MULTI-TROPHIC AQUACULTURE (IMTA) IN BRITISH COLUMBIA

- 2:00 Karen E. Jensen**, J. Christopher Taylor, Robert J. Barry, Mickie L. Powell, D. Allen Davis, Stephen A. Watts
WEIGHT GAIN OF THE SHRIMP *Litopenaeus vannamei* IS ENHANCED BY CONSUMPTION OF SEA URCHIN EGESTA
- 2:15 Muki Shpigel**, David Ben-Ezra, Vladimir Odniezov, Lilach Shauli
EUROPEAN SEA URCHIN *Paracentrotus lividus* AS A PART OF IMTA SYSTEM
- 2:30 Andrew Suhrbier**, Daniel Cheney, Ryan Crim, Lorenz Hauser, Brent Vadopalas, Henry Carson, Jeff Hetrick
DEVELOPMENT OF RED SEA CUCUMBER *Parastichopus californicus* POLY-AQUACULTURE FOR NUTRIENT UPTAKE AND SEAFOOD EXPORT
- 2:45 John Scarpa**, Paul S. Wills, Madelyn E. Russell, Christopher Robinson, Richard Baptiste
FURTHER OPTIMIZATION OF *Isochrysis* sp. (CLONE C-ISO) CULTURE FOR A LAND-BASED INTEGRATED MULTI-TROPHIC AQUACULTURE SYSTEM
- 3:15 Graham Mair**, Sam Davies, Ben Crowe, James Harris
WORM FARMING IN SOUTH AUSTRALIA – *Perinereis vallata* SEEMS TO HAVE IT ALL?
- 3:30 Ricardo Radulovich**, José Pablo Fuentes
WHITE SHRIMP *Litopenaeus vannamei* PRODUCTION IN FLOATING CAGES AT SEA AND POLYCULTURE WITH PACIFIC OYSTER *Crassostrea gigas*
- 3:45 DISCUSSION**

EFFECTS OF THE REGULATORY ENVIRONMENT ON AQUACULTURE

Wednesday, February 24 10:30 - 4:30 Concorde B

Chair: Carole R. Engle

- 10:30 George Lockwood**
HISTORICAL PERSPECTIVE ON REGULATORY ENVIRONMENT IN THE U.S.
- 11:00 Jamie Anderson**
THE U.S. BAITFISH INDUSTRY: EFFECTS OF REGULATIONS
- 11:30 Richard Smith**
WHY PROPERTY RIGHTS ARE ESSENTIAL IN DEVELOPMENT OF MARINE AQUACULTURE
- 12:00 Randy MacMillan**
THE U.S. TROUT INDUSTRY: EFFECTS OF REGULATIONS
- 12:30 LUNCH**
- 1:30 Bill Dewey**
THE WEST COAST SHELLFISH INDUSTRY: EFFECTS OF REGULATIONS
- 2:00 Jonathan van Senten**, Carole Engle
THE COSTS OF FISH HEALTH TESTING REGULATIONS ON U.S. PRODUCERS OF BAITFISH AND SPORTFISH

- 2:00 Jonathan van Senten**
COSTS OF REGULATIONS ON THE U.S. BAITFISH/SPORTFISH INDUSTRY:
RESULTS OF A NATIONAL SURVEY
- 2:30 Frank Asche**
THE REGULATORY ENVIRONMENT IN NORWAY CONTRASTED WITH THE U.S.
- 3:00 Bertrand le Gallic**
MEASURING THE ECONOMIC EFFECTS OF REGULATIONS ON AQUACULTURE IN
THE EU

ALTERNATIVE MODELS FOR INTERNATIONAL TRADE

Wednesday, February 24 1:30 - 3:30 Concorde C

Chairs: Christa Speekmann, Sarah Thompson

- 1:30 Christa Speekmann**
- 1:45 Scott Squires**
- 2:00 Sarah Thompson**
- 2:15 PANEL DISCUSSION**
Moderator: Myron Kebus

SHELLFISH CONTRIBUTED

Wednesday, February 24 1:30 - 4:30 Loire

Chair: Andrew Jeffs

- 1:30 James Morris, Kenneth Riley, Christine Voss**
INTERACTIONS BETWEEN SHELLFISH AQUACULTURE AND SUBMERGED
AQUATIC VEGETATION (SAV): A STATE OF SCIENCE ASSESSMENT TO INFORM
HABITAT EQUIVALENCY AND MORE
- 1:45 Marlene Meaders, Chris Cziesla, Phil Bloch, Grant Novak, Ruth Park**
BEYOND ACRES AND TURIONS: IMPROVING METRICS FOR EELGRASS
MITIGATION
- 2:00 Marlene Meaders, Kerrie McArthur**
EELGRASS DELINEATION METHODS AND SHELLFISH AQUACULTURE:
WHY SCALE AND EFFECT ARE IMPORTANT CONSIDERATIONS
- 2:15 Philip Staudigel, Carolyn Friedman, Maya Groner, Colleen Burge, John Bucci**
CAN EELGRASS MITIGATE THE EFFECTS OF OCEAN ACIDIFICATION ON OYSTER
HEALTH? A STABLE ISOTOPIC APPROACH
- 2:30 Bobbi Hudson, Thom Allen, Danna Moore, Andrew Suhrbier, Hannah Faulkner**
PHYSICAL AND SOCIAL DIMENSIONS OF SHELLFISH AQUACULTURE ON THE U.S.
WEST COAST

- 2:45 Fred Conte**, Abbas Ahmadi
GROUND-TRUTHING THE SHELLFISH SANITATION MODEL *PEARL*: USING PUBLIC HEALTH SANITATION DATASETS FROM PACIFIC, GULF, AND ATLANTIC STATES OF THE UNITED STATES
- 3:00 Jonathan Davis**, Kristin Saksa
DEVELOPMENTS IN THE COMMERCIALIZATION OF PURPLE-HINGE ROCK SCALLOP AQUACULTURE *Crassadoma giganteus*
- 3:15 Andrew Jeffs**, Jenni Stanley, Serena Wilkens, Hamish McDonald
COMPLEX SOUNDS BENEFITS SHELLFISH PRODUCTION
- 3:30 Mariel Gullian Klanian**, Montserrat Terrats Preciat, Elma C. Pech Jiménez
EFFECT OF FROZEN STORAGE ON PROTEIN DENATURATION AND FATTY ACIDS PROFILE OF THE RED OCTOPUS *Octopus maya*
- 3:45 Christopher Schillaci**, Marian Litvaitis, Joseph Salisbury, Greg Bettencourt
A COMPARISON OF CALCIUM CARBONATE SEDIMENT BUFFERS TO INCREASE THE LARVAL SETTLEMENT OF THE SOFT SHELL CLAM *Mya arenaria*
- 4:00 Yongwen Gao**
STABLE ISOTOPE ANALYSIS AND THE EFFECTS OF OCEAN ACIDIFICATION FROM SCALLOP SHELLS

TRIDACNA

Wednesday, February 24 1:30 - 4:30 Bordeaux

Chair: Miguel Mies

- 1:30 James Fatherree**
ON THE BIOLOGY AND MARICULTURE OF GIANT CLAMS
- 2:00 Shane Penny**
GIANT CLAMS IN THE NORTHERN TERRITORY, AUSTRALIA
- 2:15 Maria Rio Naguit**
MARICULTURE AND RESTOCKING OF GIANT CLAMS: INDONESIA AND PHILIPPINE EXPERIENCE
- 2:30 Miguel Mies**, Paulo Sumida
PRODUCTION OF SYMBIOSIS-SPECIFIC FATTY ACIDS BY DIFFERENT *Symbiodinium* CLADES ASSOCIATED WITH *Tridacna crocea* LARVAE
- 2:45 Yuen K. Ip**, Kum C. Hiong, Enan J. K. Goh, Anh H. Cao-Pham, Celine Y. L. Choo, Wai P. Wong, Shit F. Chew
THE FUNCTIONS OF CTENIDIA IN LIGHT-ENHANCED CALCIFICATION IN *Tridacna squamosa*
- 3:00 Shit F. Chew**, Kum C. Hiong, Celine Y. L. Choo, Mel V. Boo, Biyun Ching, Wai P. Wong, Yuen K. Ip
THE FATE OF PROTON IN THE EXTRAPALLIAL FLUID AND INNER MANTLE OF *Tridacna squamosa* DURING LIGHT-ENHANCED CALCIFICATION

VIBRIO

Wednesday, February 24 1:30 - 3:30 Burgundy

Chairs: Steve Jones, Cheryl Whistler

- 1:30 Cheryl Whistler**, Feng Xu, Ashley Marcinkiewicz, Jeffrey Hall, Kevin Drees, Malachi Halee, Vaughn Cooper, Stephen Jones
KNOW THY ENEMY: HOW ANALYSIS OF THE NORTHEASTERN PATHOGENI POPULATION OF *Vibrio parahaemolyticus* CAN IMPROVE PATHOGEN IDENTIFICATION AND RISK ASSESSMENT
- 1:45 Narjol Gonzalez-Escalona**, Jessica Jones, Robert Myers, Clifford Mitchell, Erin Butler, Magaly Toro, Julie Haendiges
A NON-AUTOCHTHONOUS US STRAIN OF *Vibrio parahaemolyticus* ISOLATED FROM CHESAPEAKE BAY OYSTERS CAUSED THE OUTBREAK IN MARYLAND IN 2010
- 2:00 Christopher Schillaci**, Diane Regan, Eric Hickey
Vibrio parahaemolyticus MANAGEMENT FOR OYSTERS IN MASSACHUSETTS
- 2:15 Clara H. Hard**, Laura W. Johnson
NEW PREVENTATIVE APPROACH TO LOWER RISK OF *Vibrio parahaemolyticus* ILLNESSES IN WASHINGTON
- 2:30 Kristin DeRosia-Banick**, Michael Whitney, David Carey, Joseph Decrescenzo
CONNECTICUT'S RESPONSE TO THE MANAGEMENT OF PATHOGENIC *Vibrio parahaemolyticus*
- 2:45 Anita Wright**, Lei Fang, Ying Fan, Tiffiani Onifade, Jennifer Harper, Valerie Harwood, Andrew Kane
DISTRIBUTION AND CHARACTERIZATION OF *Vibrio cholerae* IN APALACHICOLA BAY, FLORIDA
- 3:00 Joey Marchant-Tambone**, Thomas P. Kindsey, Stephanie M. Grodeska, Joshua Kling, Whitney Jaillet, Jessica L. Jones
THE EFFECTS OF HARVESTING AND HANDLING PRACTICES OF OYSTER ON *Vibrio parahaemolyticus*
- 3:15 Steve Jones**, Erin Urquhart, Meghan Hartwick, Cheryl Whistler, Vaughn Cooper
EMPIRICAL MODELING OF *Vibrio parahaemolyticus* CONCENTRATIONS AT THE ESTUARY SCALE

THURSDAY, February 25

INFLUENCE OF ACTIVISTS AND MEDIA INNOVATION IN AQUACULTURE PRODUCTION

Thursday, February 25 8:30 - 10:00 Burgundy

Chair: Dave Conley

- 8:30 Dave Conley**
AQUABOUTY'S AQUADVANTAGE SALMON – A PROLONGED JOURNEY TO MARKET: HOW INNOVATION WAS IMPEDED BY ACTIVISTS AND MEDIA FEAR-MONGERING
- 8:45 Brad Hicks**
MISINFORMATION AND DECEIT MASQUERADING AS SCIENCE IS BRINGING AN END TO THE INFLUENCE OF ACTIVISTS ON AQUACULTURE INNOVATION AND DEVELOPMENT
- 9:00 Ian Bricknell**
“THAT’S BECAUSE YOU’RE AN EVIL AQUACULTURE SCIENTIST”...
- 9:15 Martin O’Farrell, Robin McKimm, Carl Burger**
THE “HUMANE FISH HARVESTER” – AN INNOVATIVE TECHNOLOGY DESIGNED FOR THE HUMANE SLAUGHTER OF FARMED FISH AT AQUACULTURE FACILITIES
- 9:30 Stephen F. Cross**
PERCEPTION – THE REALITY THAT DRIVES AQUACULTURE INNOVATION IN COASTAL BRITISH COLUMBIA, CANADA
- 9:45 Neil Anthony Sims, Gavin Key**
ANTI-AQUACULTURE ACTIVISM: A TERMINAL AFFLICTION, OR A CURABLE ILL?

ECONOMICS AND MARKETING - CONTINUED

Thursday, February 25 8:30 - 12:30 Versailles 3

Chair: Frank Ashe

- 8:30 Mohammad Hasan, Madan Dey**
FORECASTING MONTHLY U.S. FARM-RAISED CATFISH *Ictalurus punctatus* POND BANK FISH PRICE AND FEED PRICE
- 8:45 Isaac Ankamah-Yeboah, Julia Bronnmann, Max Nielsen**
MARKET INTEGRATION BETWEEN FARMED AND WILD FISH: EVIDENCE FROM THE WHITEFISH MARKET IN GERMANY
- 9:00 Jose Fernandez Polanco, Ignacio Llorente, Ladislao Luna**
PRICE INTEGRATION ALONG THE SPANISH GILTHEAD SEABREAM *Sparus aurata* VALUE CHAIN
- 9:15 Huiqiang Wang, Madan Dey**
A FRAMEWORK FOR PREDICTING U.S. CATFISH PRICES: THE LEADING INDICATORS APPROACH

- 9:30 Hans-Martin Straume**, Frank Asche, Erling Vårdal
TRADE DURATION FOR SEAFOOD
- 9:45 Dengjun Zhang**, Frank Asche, Jinghua Xie
EXPORT COMPOSITION AND MARKET POWER: THE CASE OF SALMON
- 10:00 BREAK**
- 11:00 Akua Akuffo**, Kwamena Quagrainie
DOES TECHNICAL SUPPORT HELP TO IMPROVE FOOD SECURITY? A CASE STUDY OF TANZANIAN FISH FARMING HOUSEHOLDS
- 11:15 Bernadette T. Fregene**, Peace Okoh
GENDER PARTICIPATION IN AQUACULTURE VALUE CHAIN IN DELTA STATE, NIGERIA
- 11:30 Cortney Ohs**, Audrey Beany
EVALUATION OF MARKET SIZE AND POTENTIAL FOR AQUACULTURE PRODUCED MARINE BAIT SHRIMP IN FLORIDA VIA A RETAILER SURVEY
- 11:45 Daniel Taylor**, David Kuhn, Terrill Hanson, Laura Lawson
PROTOCOLS AND MARKET OPPORTUNITIES FOR SHIPPING LIVE SHRIMP IN WATERLESS CONDITIONS
- 12:00 Yang Han**
AQUATIC-PRODUCTS QUALITY AND SAFETY: CHINESE AQUATIC PRODUCERS' ATTITUDES AND BEHAVIOR

MARINE AQUACULTURE AND SPATIAL PLANNING – PRINCIPLES, PERSPECTIVES AND OPPORTUNITIES

Thursday, February 25 8:30 – 3:00 Vendome A

Chairs: Kenneth Riley, José Aguilar-Manjarrez

- 9:00 Jose Aguilar Manjarrez**, Doris Soto, Randall Brummett
AQUACULTURE ZONING, SITE SELECTION AND AREA MANAGEMENT UNDER THE ECOSYSTEM APPROACH TO AQUACULTURE
- 9:15 Kenneth D. Black**
AQUASPACE – ECOSYSTEM APPROACH TO MAKING SPACE FOR SUSTAINABLE AQUACULTURE
- 9:30 Will McClintock**
GEODESIGN AND AQUACULTURE ZONING IN THE CONTEXT OF MARINE SPATIAL PLANNING: SEASKETCH IN NEW ZEALAND
- 9:45 Roberto Mayerle**, Katharina Niederndorfer, Ketut Sugama
SPATIAL PLANNING OF COASTAL CAGE AQUACULTURE IN INDONESIA BASED ON SIMULATION MODELS
- 10:00 BREAK**

- 11:00 Rebecca Gentry**, J.M. Stevens, C.V. Kappel, T.W. Bell, C.C. Maue, S.D. Gaines, C. White, S.E. Lester
SPATIAL PLANNING FOR OFFSHORE AQUACULTURE IN THE SOUTHERN CALIFORNIA BIGHT: BALANCING MULTIPLE OBJECTIVES TO ACHIEVE SUSTAINABLE DEVELOPMENT AND ECOSYSTEM HEALTH
- 11:15 Michael Parke**
THE PACIFIC ISLANDS SCIENCE CENTER MARINE MAPPER, AN ON-LINE SPATIAL DECISION SUPPORT TOOL FOR THE U.S. PACIFIC ISLANDS MARINE PLANNING
- 11:30 Kenneth Riley**, Lisa Wickliffe, James Morris
A GEOSPATIAL DECISION SUPPORT TOOL FOR AQUACULTURE IN THE GULF OF MEXICO
- 11:45 Lisa Wickliffe**, Kenneth Riley, James Morris
MAXIMIZING THE VALUE OF OFFSHORE SPACE: USING THE GULF AQUAMAPPER AND GEOPLANNER FOR AQUACULTURE SITE SELECTION IN THE GULF OF MEXICO
- 12:00 Øivind Strand**, Junyong You, Anne A. Hageberg, Aline Gangnery, Cedric Bacher, Baisong Chen, Jianguang Fang
A WEB BASED DECISION SUPPORT SYSTEM FOR AQUACULTURE SITING AND MANAGEMENT
- 12:30 LUNCH**
- 1:30 Tessa Getchis**, Cary Chadwick, Kristin DeRosia-Banick
MAPS MATTER FOR MARINE AQUACULTURE
- 1:45 Kenny Black**, Alexander Murray, Matt Gubbins
SPATIAL TOOLS TO MANAGE SUSTAINABLE AQUACULTURE IN SCOTLAND: GOVERNMENT AND INDUSTRY
- 2:15 DISCUSSION**

STUDENT SESSION: AQUACULTURE CAREER DEVELOPMENT AND ADVICE

Thursday, February 25 8:30 - 12:30 Champagne 2
Chairs: Jonathan van Senten, Evan Durland

- 8:30 Carl Kittel**
CAREER DEVELOPMENT AND CAREER OPPORTUNITIES IN AQUACULTURE
- 8:45 Jonathan van Senten**
OPPORTUNITIES FOR GRAD STUDENTS TO MAXIMIZE THEIR RESUME
- 9:00 Carole Engle**
PREPARING FOR AN ACADEMIC CAREER IN AQUACULTURE
- 9:15 Rosie Trice**
AUTHORSHIP (WILEY-BLACKWELL PUBLISHING)

- 9:30 Nicole Rhody**
EXPERIENCES OF WORKING FOR A NON-PROFIT RESEARCH FACILITY
- 9:45 Huy Tran**
KEEPING AQUACULTURE “NEW” FOR OVER 28 YEARS
- 10:00 BREAK**
- 11:00 Bob Robinson**
AQUACULTURE SALES AS A CAREER
- 11:15 Michael R. Denson**
OPPORTUNITIES FOR EMPLOYMENT IN STATE GOVERNMENT: A SOUTH CAROLINA PERSPECTIVE ON AQUACULTURE RESEARCH AND GETTING HIRED IN TODAY'S EMPLOYMENT MARKET
- 11:30 Bradley Todd**
FROM MARINE CORPS TO FARM MANAGER, QUITE A JOURNEY
- 11:45 John Ewart**
WORLD AQUACULTURE SOCIETY EMPLOYMENT SERVICE
- 12:00 Mike Freeze**
FROM IGNORANCE TO SUCCESS: A THIRTY YEAR JOURNEY THROUGH THE PITFALLS OF AQUACULTURE
- 12:15 DISCUSSION**

WORKGROUP TO ESTABLISH CODE OF CONDUCT

Thursday, February 25 8:30 - 12:30 Concorde C

Chair: Pat Mazik

8:30 Patricia (Pat) Mazik, Reginal M. Harrell

CREATING A DRAFT CODE OF CONDUCT

With the growing dependence on aquaculture as a global supplier of seafood and aquaculture products for consumptive, recreational, or restoration purposes ethical conflicts between producers and the general public are inevitable. The increased visibility of aquaculture on global basis requires producers, suppliers, scientists, educators, managers and regulators to proactively and responsibly understand and appropriately respond to perceived ethical issues associated with the discipline. Ethical challenges that aquaculture and fisheries management face revolve around environmental sustainability, animal welfare, responsible conduct in research, stock enhancement and restoration, genetic manipulation and management, plant and animal health and well-being, and social and regulatory concerns.

This workgroup will frame the issue from a responsible, proactive perspective with the goal of creating a draft code of conduct. Participants will help draft the code of conduct and will be charged with addressing both concerns and opportunities while offering suggestions on how to avoid or minimize ethical challenges within their specific focus discussion.

OMICS TOOLS FOR AQUACULTURE

Thursday, February 25 8:30 - 12:30 Versailles 2

Chairs: Eric Saillant, Eric Peatman

- 8:30 Eric A. Saillant**, Adrienne Norrell, Kenneth L. Jones
GENOMIC TOOLS FOR THE MANAGEMENT OF RED SNAPPER AQUACULTURE AND STOCK ENHANCEMENT
- 8:45 Christopher M. Hollenbeck**, Shannon J. O’Leary, David S. Portnoy, John R. Gold
DEVELOPMENT OF GENOMIC RESOURCES FOR COMMERCIAL AND RESTORATION AQUACULTURE OF RED DRUM AND SOUTHERN FLOUNDER
- 9:00 Geoffrey Waldbieser**, Brian Bosworth
UTILIZATION OF THE CHANNEL CATFISH GENOME ASSEMBLY IN A SELECTIVE BREEDING PROGRAM
- 9:15 Dina Proestou**, Tal Ben-Horin, Jessica Moss Small, Standish K. Allen, Jr.
THE PERFORMANCE OF OYSTER FAMILIES EXPOSED TO DERMO DISEASE IS CONTINGENT ON THE SOURCE OF PATHOGEN EXPOSURE
- 9:30 Wei Xu**
GENOMIC ADAPTATION OF SHELLFISH LARVAL DEVELOPMENT AND HOST DEFENSE TO STRESS OF OCEAN ACIDIFICATION
- 9:45 Eric Peatman**, Dongdong Zhang, Wilawan Thongda, Benjamin Beck, Haitham Mohammed, Covadonga Arias
MORE THAN JUST ANTIBODIES: PROTECTIVE MECHANISMS OF A MUCOSAL VACCINE AGAINST FISH PATHOGEN *Flavobacterium columnare*
- 10:00 BREAK**
- 11:00 Benjamin Beck**, S. Adam Fuller, Chao Li, Bartholomew W. Green, Steven D. Rawles, Carl D. Webster, Eric Peatman
HEPATIC TRANSCRIPTOMIC AND METABOLIC RESPONSES OF HYBRID STRIPED BASS TO ACUTE AND CHRONIC HYPOXIC INSULT
- 11:15 Tiago Hori**, Debbie Plouffe, John Buchanan, Mark Fast
RNA-SEQ ANALYSIS OF THE ATLANTIC STURGEON GILL RESPONSE TO THE “STURGEON-LOUSE” *Dichelesthium oblongum*
- 11:30 Andrea C. Alfaro**, Tim Young
METABOLOMICS: AN INNOVATIVE AND POWERFUL TOOL FOR AQUACULTURE
- 11:45 Daniel Bearden**, Fabio Casu, Carl Yeoman, Gibson Gaylord, Fredrick Barrows, Matthew Powell, Justin Yost, Aaron Watson, Paul Sandifer, Michael Denson
NMR-BASED METABOLOMICS FOR FINFISH FEED STUDIES
- 12:00 Fabio Casu**, Daniel Bearden, Aaron Watson, Justin Yost, John Leffler, Gibson Gaylord, Frederic Barrows, Paul Sandifer, Michael Denson
METABOLOMICS ANALYSIS OF EFFECTS OF COMMERCIAL SOY-BASED PROTEIN PRODUCTS IN RED DRUM *Sciaenops ocellatus*

THURSDAY

SHELLFISH INITIATIVE

Thursday, February 25 8:30 - 12:30 Loire

Chair: Tessa Getchis

- 8:30 Michael C. Rubino**
THE NOAA NATIONAL SHELLFISH INITIATIVE: BUILDING PARTNERSHIPS TO MAXIMIZE THE ECOLOGICAL AND ECONOMIC BENEFITS OF SHELLFISH
- 8:45 Julie Decker**
THE ALASKA MARICULTURE INITIATIVE: CREATION OF A STRATEGIC PLAN TO GROW A \$1 BILLION INDUSTRY IN 30 YEARS
- 9:00 Laura K. Hoberecht, Julie Horowitz**
MORE TO DO! PHASE II OF THE WASHINGTON SHELLFISH INITIATIVE
- 9:15 Kessina Lee**
THE OREGON SHELLFISH INITIATIVE: AN UPDATE AND THE PATH FORWARD
- 9:30 Diane Windham**
STATE AND REGIONAL SHELLFISH INITIATIVES – THE CALIFORNIA SHELLFISH INITIATIVE
- 9:45 Jamie Miller, William Walton**
UPDATE ON OYSTER MANAGEMENT IN MISSISSIPPI
- 10:00 BREAK**
- 11:00 William C. Walton**
UPDATES AND OUTLOOK FOR THE GULF OF MEXICO SHELLFISH INITIATIVE
- 11:15 Donald Webster**
MARYLAND INITIATIVES TO ADVANCE SHELLFISH AQUACULTURE: STRATEGIES FOR ATTRACTING INVESTMENT FOR PROFITABLE DEVELOPMENT
- 11:30 Tessa Getchis, Julie Rose, Nancy Balcom, Anoushka Concepcion, Sylvain De Guise**
CONNECTICUT INITIATIVES TO GROW SHELLFISH AQUACULTURE, FISHERIES AND NATURAL RESOURCES
- 11:45 Azure Cygler, Jennifer McCann, Dale Leavitt, David Beutel, Jeffrey Mercer, Monique LaFrance Bartley**
THE RHODE ISLAND SHELLFISH MANAGEMENT PLAN: A MODEL FOR STAKEHOLDER PARTICIPATION AND INDUSTRY-AGENCY COLLABORATION
- 12:00 DISCUSSION**

THURSDAY

AQUACULTURE IN CALIFORNIA: YESTERDAY, TODAY, AND BEYOND

Thursday, February 25 8:30 - 12:30 Concorde A

Chair: Tony Schuur

- 8:30 Lauren Bernadett**, Tony Schuur
THE REGULATORY ENVIRONMENT
- 9:00 Mark Drawbridge**
MARINE FINFISH AQUACULTURE
- 9:15 Paul Olin**
ACADEMIC SUPPORT FOR AQUACULTURE – SHRINKING OR SURGING?
- 9:30 Paul Olin**
EDUCATIONAL OPPORTUNITIES IN AQUACULTURE
- 9:45 Tony Vaught**
INLAND AQUACULTURE OVERVIEW AND ITS TIES TO EMERGING OFFSHORE
FARMS: FRESHWATER FARMS, HATCHERIES FOR OFFSHORE PRODUCTION, AND
AQUAPONICS
- 10:00 BREAK**
- 11:00 Tony Vaught**
FISHERMEN'S MARKETS: THE CALIFORNIA LEGISLATURE INCLUDES
AQUACULTURE IN THE TRADITIONAL COASTAL MARKETPLACE
- 11:15 Tony Schuur**
GEOTHERMAL AQUACULTURE
- 11:30 Jerry Schubel**
PUBLIC PERCEPTION AND EDUCATION ABOUT FARMED SEAFOOD
- 12:00 OPEN Q&A WITH CALIFORNIA AQUACULTURE ASSOCIATION SPEAKERS PANEL**

THURSDAY

COMMERCIAL AQUACULTURE HEALTH PROGRAM STANDARDS (CAHPS)

Thursday, February 25 8:30 - 10:00 Concorde B

Chair: Deborah Millis

- 8:30 Randy MacMillan**
CAHPS – WHERE ARE WE NOW?
- 9:00 Kathleen Hartman**
CAHPS OVER THE LAST YEAR
- 9:30 Kathleen Hartman**
CAHPS – WHAT'S NEXT?

SHRIMP PRODUCTION AND BIOFLOC

Thursday, February 25 8:30 - 5:00 Champagne 1

Chair: Wilson Wasielesky

- 8:30 Darryl E. Jory**
THE GLOBAL SHRIMP FARMING INDUSTRY: STATUS, CHALLENGES AND PERSPECTIVES
- 9:00 Nyan Taw**
INTENSIVE SHRIMP FARMING: FARM BIOSECURITY AND BIOFLOC TECHNOLOGY FOR SUSTAINABLE PRODUCTION AND DISEASE PREVENTION AND CONTROL
- 9:15 Tzachi Samocha**, David I. Prangnell, Terrill R. Hanson, Granvil D. Treece, Leandro F. Castro, Timothy C. Morris, Nick Staresinic
DESIGN AND OPERATION OF INDOOR NO WATER EXCHANGE SUPER-INTENSIVE BIOFLOC-DOMINATED SYSTEMS FOR PRODUCING PACIFIC WHITE SHRIMP: THE MANUAL
- 9:30 Terrill Hanson**, Tzachi Samocha, David Prangnell, Granvil Treece, Leandro Castro, Timothy Morris, Nick Staresinic
ECONOMICS OF SUPER-INTENSIVE RECIRCULATING SHRIMP PRODUCTION SYSTEMS: THE MANUAL
- 9:45 Andrew Ray**, Adam Cecil, William Auberry
INDOOR MARINE SHRIMP PRODUCTION AT KENTUCKY STATE UNIVERSITY
- 10:00 BREAK**
- 11:00 Meenakshisundaram Menaga**, S. Felix Sugantham
DEVELOPMENT OF FLOC CONCENTRATE IN THE NURSERY CULTURE OF *Litopenaeus vannamei* UNDER AEROBIC MICROBIAL FLOC DRIVEN RACEWAYS AND LINED PONDS
- 11:15 David I. Prangnell**, Leandro F. Castro, Abdulmehdi S. Ali, Thomas R. Zeigler, Craig L. Browdy, Tim A. Markey, Darrin Honious, Tzachi M. Samocha
IONIC CHANGES DURING THE PRODUCTION OF *Litopenaeus vannamei* FED TWO FEEDS OF DIFFERING PROTEIN CONTENT IN A ZERO-EXCHANGE, BIOFLOC-DOMINATED SYSTEM
- 11:30 Héctor M. Esparza-Leal**, Wilson Wasielesky Jr., João A. Amaral Xavier, Ely S. López-Álvarez
EFFECT OF DIFFERENT SALINITIES AND ZERO-WATER EXCHANGE ON THE PERFORMANCE OF *Litopenaeus vannamei* POSTLARVAE REARED WITH BIOFLOC
- 11:45 Yu Yu**, Yu Xu
TOLERANCE TO AMMONIA, NITRITE AND DISSOLVED OXYGEN IN POSTLARVAE AND JUVENILES OF WHITE SHRIMP *Penaeus setiferus* AND *Penaeus vannamei*
- 12:00 João Manoel Cordeiro Alves**, Aline Bezerra, Dariano Krummenauer, Geraldo Fóes, Carlos Augusto Prata Gaona, Wilson Wasielesky Jr.
THE USE OF FISH MEAL ANALOG IN THE FEEDING OF *Litopenaeus vannamei* BFT CULTURE SYSTEM WITH DIFFERENT PROTEIN LEVELS
- 12:30 LUNCH**

THURSDAY

- 1:30 Dariano Krummenauer**, Aline Bezerra, Carlos Gaona, Luis H. Poersch, Wilson Wasielesky Jr.
THE USE OF BELT FEEDERS IN SUPER INTENSIVE CULTURE OF PACIFIC WHITE SHRIMP *Litopenaeus vannamei* IN BFT SYSTEMS
- 1:45 Wilson Wasielesky**, Lucas Genésio Silveira, Bob Advent, Geraldo Foes, Alessandro Cardozo, Luis Poersch, Carlos Gaona, Dariano Krummenauer
COMPARATIVE STUDY OF AERATION INJECTOR SYSTEM AND MICRO-PERFORATED AIR DIFFUSER HOSES IN SUPER INTENSIVE CULTURE OF *Litopenaeus vannamei* IN SOUTHERN BRAZIL
- 2:00 Thomas Drury**, Andrew J. Ray
SHRIMP *Litopenaeus vannamei* PRODUCTION IN CLEAR WATER AND BIOFLOC SYSTEMS
- 2:15 Hisham A. Abdelrahman**, Claude E. Boyd
INFLUENCE OF VARIATION IN WATER TEMPERATURE ON SURVIVAL, GROWTH, AND YIELD OF PACIFIC WHITE SHRIMP *Litopenaeus vannamei* IN INLAND PONDS FOR LOW-SALINITY CULTURE
- 2:30 Piyajit Pratipasen**, Claude E. Boyd
EFFECT OF AMMONIA NITROGEN ON PRODUCTION AND HEMOLYMPH OF PACIFIC WHITE SHRIMP *Litopenaeus vannamei* CULTURED IN LOW SALINITY PONDS IN GREENE COUNTY, ALABAMA
- 2:45 Susan Laramore**, John Scarpa
TOWARDS ESTABLISHING ENVIRONMENTAL MINERAL GUIDELINES FOR LOW SALINITY SHRIMP CULTURE IN FLORIDA
- 3:00 BREAK**
- 3:30 Piyajit Pratipasen**
EVALUATION OF PROBIOTICS USE FOR WATER QUALITY IMPROVEMENT IN INLAND, LOW-SALINITY SHRIMP PONDS IN GREENE COUNTY, ALABAMA
- 3:45 CANCELLED**
- 4:00 Humberto Villarreal**, José Naranjo, Walter Quadros, José Andrés Hernández, Luis Daniel Moreno, Mayra Vargas
CHARACTERIZATION OF A LOW WATER EXCHANGE SYSTEM FOR INTENSIVE SHRIMP PRODUCTION IN A SUBTROPICAL ENVIRONMENT
- 4:15 José Valverde**, Jorge Alfaro
COMPENSATORY GROWTH AND PRODUCTIVITY IN THE CULTURE PHASES OF MATERNITY, DEVELOPMENT AND GROW-OUT OF THE WHITE SHRIMP *Litopenaeus vannamei* IN GOLFO DE NICOYA, COSTA RICA
- 4:30 Partha Bandyopadhyay**, Prasenjit Barman, Pradeep K. Das Mohapatra
CHARACTERIZATION OF AQUATIC NITRIFYING BACTERIUM *B. cereus* PB45 AND STUDY OF ITS NAPA AND HAO GENETIC POTENTIAL IN WATER QUALITY MANAGEMENT

SHRIMP ALLERGY

Thursday, February 25 8:30 - 4:00 Chablis

Chair: Acacia Alcivar-Warren

The “Shrimp Allergy” session will address basic and clinical research on the 18 major and minor shrimp allergens identified so far from various shrimp species.

Session Moderators:

Patrick S. Leung, K. H. Chu, Gilma Delgado, Acacia Alcivar-Warren, Chika Ikeogu, Chinniah Amutha

8:30 Acacia Alcivar-Warren

INTRODUCTION / WELCOME – RECOGNITION TO ‘JOHNNIE CASTRO MONTEALEGRE AWARD’ WINNERS, AND COMMENTS ON POTENTIAL ASSOCIATION OF NEW SHRIMP ALLERGENS WITH PLAGUICIDES, HORIZONTAL TRANSFER OF MICROBIAL TRANSGENES PRESENT IN GENETICALLY MODIFIED CROPS USED IN AQUAFEEDS, AND ABLATION

8:45 Acacia Alcivar-Warren, Jacqueline Presedo, Gilma Delgado, Alexandra Bowen, Amber Williams

TRANSPOSABLE ELEMENT-LIKE REPEATS IN 18 SHRIMP ALLERGEN cDNAs HOMOLOGOUS TO METABOLISM AND IMMUNE RESPONSE (ANTIMICROBIAL) GENES

9:00 Alexandra Bowen, Acacia Alcivar-Warren, , Jacqueline Presedo, Amber Williams

ARGININE KINASE: AN ESSENTIAL COMPONENT OF RISC THAT BINDS TO ANTIVIRAL WSSV vp28-siRNA, SHOWS VARIABLE mRNA EXPRESSION AND SINGLE NUCLEOTIDE POLYMORPHISMS IN *Fenneropenaeus merguensis* (THAILAND, SINGAPORE), *Litopenaeus vannamei* (MEXICO, CHINA, THAILAND, USA), and *Penaeus monodon* (THAILAND, TAIWAN, CHINA, INDIA) – A REVIEW

9:15 Acacia Alcivar-Warren

HEMOCYANIN: A SHRIMP ALLERGEN, AN IMMUNE RESPONSE GENE (ANTIVIRAL AND ANTIFUNGAL), A BIOMARKER OF EXPOSURE TO *Vibrio parahaemolyticus*, AND SINGLE NUCLEOTIDE POLYMORPHIS FOR TRACEABILITY OF COMMODITY AND SPF SHRIMP

9:30 Chinniah Amutha, Acacia Alcivar-Warren, Jianhai Xiang

VITELLOGENIN: A MOLTING GENE REGULATED BY GLYPHOSATE IS ALSO A SHRIMP ALLERGEN

10:00 BREAK

Session Moderators:

Patrick S. Leung, K. H. Chu, Gilma Delgado, Acacia Alcivar-Warren, Chika Ikeogu, Chinniah Amutha

10:30 Gilma Delgado Miranda, Gustavo Arencibia Carballo, Raquel Silveira Coffigny

TOXIC BENTONIC MICROALGAS ASSOCIATED WITH CIGUATERA AND OTHER INTOXICATIONS DUE TO CONSUMPTION OF AQUATIC ORGANISMS IN CUBA

11:00 Patrick S.C. Leung, Nicki Y.H. Leung, Christine Y.Y. Wai, Ka Hou Chu

ALLERGEN-SPECIFIC IMMUNOTHERAPY OF SHELLFISH ALLERGY: APPLICATION OF MIMOTOPE COCKTAIL CORRESPONDING TO IMMUNODOMINANT REGIONS OF SHRIMP ALLERGEN TROPOMYOSIN

- 11:15 Ka Hou Chu**, Christine Y.Y. Wai, Nicki Y.H. Leung, Patrick S.C. Leung
ALLERGEN-SPECIFIC IMMUNOTHERAPY OF SHELLFISH ALLERGY: APPLICATION OF HYPOALLERGEN-ENCODING DNA VACCINE
- 11:30 Damir Hernandez Martinez**, Acacia Alcivar-Warren, Anna Perez Beloborodova, Raquel Silveira Coffigny
-ACTIN: A NEW SHRIMP ALLERGEN - INTERACTIONS WITH IHHNV
- 11:45 Anne C. Eischeid**
QUANTITATIVE REAL-TIME PCR BASED DETECTION OF SHRIMP IN COMPLEX FOOD MATRICES
- 12:00 Pharima Phiriyangkul**, Acacia Alcivar-Warren
IDENTIFICATION OF ALLERGENS AND CROSS REACTIVITY BETWEEN *Macrobrachium* spp. AND EDIBLE FIELD CRICKET *Gryllus bimaculatus*

12:30 LUNCH

Session Moderators:

Patrick S. Leung, K. H. Chu, Gilma Delgado, Acacia Alcivar-Warren, Chika Ikeogu, Chinniah Amutha

- 1:30** Acacia Alcivar-Warren, **Gustavo Arencibia Carballo**, Sofia Figueroa Zambrano, Miriam Alcivar Arteaga, Raquel Silveira Coffigny, Diego Alejandro Tigrero, Gilma Delgado Miranda, Marisela Hernandez, Christian Alcivar Navarrete, Mayra Galindo, Gober Asuncion, Mohammed Bedhane, Chika F. Ikeogu, Chinniah Amutha, Dang Thi Hoang Oanh
ENDOCRINE DISRUPTING CHEMICALS (metals, Glyphosate, Atrazine, DDE) AND OTHER PLAGUICIDES AND MICROBIAL TRANSGENES *Bacillus thuringiensis* PRESENT IN SOIL, SEDIMENT OF MANGROVES AND SHRIMP PONDS, SHELLFISH, FISH, AQUAFEDS AND PEOPLE FROM TROPICAL COUNTRIES – AN IN-DEPTH LITERATURE REVIEW
- 2:00 Acacia Alcivar-Warren**
THE NORTHERN SHRIMP *Pandalus borealis*: A POTENTIAL 'HYPOALLERGENIC' SHRIMP FOR AQUACULTURE IN THE NORTHEASTERN UNITED STATES?
- 2:15 Sofia Figueroa Zambrano, Acacia Alcivar-Warren**, Gilma Delgado Miranda, Raquel Silveira, Miriam Alcivar Arteaga, Diego Alejandro Tigrero, Gustavo Arencibia
MEETING OF 'THE SHRIMP EPIGENOME (shrimpENCODE) PROJECT' COLLABORATORS TO DISCUSS A WHITE PAPER TO FEDERAL AGENCIES REQUESTING FUNDING FOR BASIC RESEARCH ON INTERACTIONS OF ZIKA VIRUS, MICROCEPHALY, GMO MOSQUITOS, AND THE LARVICIDE *Bacillus thuringiensis* USED FOR MOSQUITO CONTROL AND MANAGEMENT OF SHRIMP PONDS. *Bacillus thuringiensis* IS ALSO ASSOCIATED WITH AHPND/EMS-CAUSING *Vibrio parahaemolyticus*. OPEN TO THE PUBLIC

FINFISH NUTRITION

Thursday, February 25 8:30 - 5:00 Champagne 3

Chairs: Gibson Gaylord, Rebecca Lochmann, Yathish Ramena

- 8:30 Lay Nguyen**, Allen Davis
COMPARISON OF CRYSTALLINE LYSINE AND INTACT LYSINE USED AS A SUPPLEMENT IN PRACTICAL DIETS OF NILE TILAPIA *Oreochromis niloticus*
- 8:45 Brittany Peachey**, Delbert Gatlin III
DIETARY HISTIDINE REQUIREMENT OF JUVENILE RED DRUM *Sciaenops ocellatus*
- 9:00 Sergio Castillo**, Delbert M. Gatlin III
DIETARY VALINE REQUIREMENT OF JUVENILE RED DRUM *Sciaenops ocellatus* AND THE EFFECT OF EXCESS BRANCHED-CHAIN AMINO ACIDS ON GROWTH PERFORMANCE
- 9:15 Miguel A. Cabanillas Gámez**, Lus M. López Acuña, Mario A. Galaviz Espinoza, Maricela Flores Ibarra, Conal D. True
TRYPTOPHAN AS MODULATOR OF CORTISOL, GLUCOSA AND LACTATE LEVELS IN PLASMA OF *Totoaba macdonaldi* UNDER STRESS
- 9:30 Yufan Zhang**, Delbert M. Gatlin III
THE EFFECT OF AFLATOXIN-B1 ON HYBRID STRIPED BASS *Morone chrysops* × *Morone saxatilis* AND ASSESSMENT OF DIETARY SUPPLEMENTATION OF ARGININE FOR THE PREVENTION OF AFLATOXICOSIS
- 9:45 Alton Burns**
CREATINE SUPPLEMENTATION IMPROVES GROWTH AND SURVIVABILITY OF JUVENILE RED DRUM *Sciaenops ocellatus* RAISED IN LOW-SALINITY CONDITIONS
- 10:00 BREAK**
- 10:00 David Poppi**, Brett Glencross, Stephen Moore
REDEFINING THE REQUIREMENT FOR TOTAL SULPHUR AMINO ACIDS IN THE DIET OF JUVENILE BARRAMUNDI *Lates calcarifer* INCLUDING ASSESSMENT OF THE CYSTEINE REPLACEMENT VALUE
- 11:00 Ivan Viegas**, João Rito, Miguel A. Pardal, John Jones
ESTIMATING DE NOVO LIPOGENESIS IN EUROPEAN SEABASS *Dicentrarchus labrax* L. USING DEUTERATED WATER (2H₂O)
- 11:15 Kelli Barry**, Jesse Trushenski
REEVALUATING THE ESSENTIAL FATTY ACID REQUIRMENTS OF RAINBOW TROUT *Oncorhynchus mykiss*
- 11:30 Christopher Jackson**, Artur N. Rombenso, Jesse Trushenski
REEVALUATING THE ESSENTIAL FATTY ACID REQUIREMENTS OF CHANNEL CATFISH
- 11:45 Kevin Stuart**, Ron Johnson, Lisa Armbruster, Mark Drawbridge
MANIPULATION OF ARACHIDONIC ACID IN THE DIET OF ADULT CALIFORNIA YELLOWTAIL *Seriola lalandi*
- 12:00 Dave Jirsa**, Jesse Trushenski, Andrea Marino, Mark Drawbridge
EMULSIFIERS IN SOYBEAN OIL-BASED DIETS FOR CALIFORNIA YELLOWTAIL

- 12:15 Joel Van Eenennaam**, Serge Doroshov, Ken Beer
POTENTIAL BENEFITS OF A LOW FAT FINISHING DIET FOR WHITE STURGEON
Acipenser transmontanus CAVIAR PRODUCTION
- 12:30 LUNCH**
- 1:30 Mayra L. González-Félix**, Martin Perez-Velazquez, Christian Minjarez-Osorio
EFFECT OF DIETARY LIPID LEVEL ON GROWTH PERFORMANCE, FEED
UTILIZATION, AND BODY COMPOSITION OF TOTOABA *Totoaba macdonaldi*
- 1:45 Guillaume Salze**, Dave Jirsa, Kevin Stuart, Allen Davis, Mark Drawbridge
EFFECTIVE USE OF CARBOHYDRATES AS A DIETARY ENERGY SOURCE IN
CALIFORNIA YELLOWTAIL *Seriola lalandi*
- 2:00 Gabriela Gaxiola**, Martin Arenas, Alfonso Alvarez, Gerard Cuzon, Maite Mascaro,
Carlos Maldonado
EFFECT OF SALINITY AND DIETARY PROTEIN LEVEL ON PHYSIOLOGICAL
CONDITION AND DIGESTIVE ACTIVITY OF JUVENILES OF SNOOK *Centropomus*
undecimalis REARED IN CONTROLLED CONDITION
- 2:15 Yathish Ramena**, Miles Lange, Steven Rawles, Rebecca Lochmann, Pengyin Chen,
T. Gibson Gaylord, Matthew McEntire, Benjamin Beck, Bradley Farmer,
Frederick T. Barrows
THE EFFECT OF β -CONGLYCININ AND GUT HISTOLOGY OF THE SUNSHINE BASS
FED DIETS WITH NEW VARIETIES OF NON-GM SOYBEANS
- 2:30 Peter M. Nicklason**
INACTIVATION OF ANTI-NUTRITIONAL FACTORS IN WHOLE FAT SOYBEANS AT
DIFFERENT TEMPERATURES AND MOISTURE CONTENT
- 2:45 Yathish Ramena**, Steven D. Rawles, Rebecca Lochmann, Pengyin Chen,
T. Gibson Gaylord, Matthew McEntire, Benjamin Beck, Bradley Farmer, Miles Lange,
Frederick T. Barrows
EVALUATION OF GROWTH, NUTRIENT RETENTION, HEALTH, AND RESISTANCE TO
BACTERIAL CHALLENGE IN SUNSHINE BASS FED DIETS WITH NEW VARIETIES
OF NON-GENETICALLY MODIFIED SOYBEANS
- 3:00 BREAK**
- 3:30 Justin Yost**, Madison Powell, Wendy Sealey, Frederic Barrows, Michael Denson,
Aaron Watson
EFFECTS OF GRADED LEVELS OF DIETARY SOYBEAN MEAL INCLUSION ON
GROWTH OF COBIA *Rachycentron canadum*
- 3:45 Thomas Welker**, Frederic Barrows, Ken Overturf, T. Gibson Gaylord,
Jason Abernathy
MANGANESE REQUIREMENT OF RAINBOW TROUT FED A COMMERCIAL-TYPE,
PLANT-BASED DIET
- 4:00 Matthew Cook**, Ronald Johnson
USING METAL OXIDE MARKERS FOR LARVAL FEEDING AND NUTRITION STUDIES
- 4:15 CANCELLED**

ENHANCING AQUATIC VETERINARY PRACTICE AND CLIENT PRODUCTION

Thursday, February 25 8:30 - 5:00 Bordeaux

Chair: David Scarfe



Moderator: A.D. Scarfe

8:30 Christopher Good, Travis May, Curtis Crouse, Steven Summerfelt
ASSESSING THE IMPACT OF SWIMMING EXERCISE AND THE RELATIVE SUSCEPTIBILITY OF RAINBOW TROUT *Oncorhynchus mykiss* AND ATLANTIC SALMON *Salmo salar* FOLLOWING INJECTION CHALLENGE WITH *Weissella ceti*

8:45 Katherine Haman, Kenneth Warheit
HOST AND ENVIRONMENTAL MICROBIOMES – WHAT CAN THEY TELL US ABOUT DISEASE OUTBREAKS?

9:00 Janet Whaley, Jane Staveley, Josie Nusz
ENVIRONMENTAL ASSESSMENT OF THERAPEUTIC DRUGS USED IN AQUACULTURE

9:15 Myron J. Kebus
VETERINARY SOLUTIONS TO TROUT DISEASE CASES

9:30 Jennifer A. Dill
THE IMPORTANCE OF COMMUNICATION TO ENHANCE THE VALUE AND EFFICIENCY OF AQUATIC DIAGNOSTICS

10:00 BREAK

Moderator: TBD

11:00 Jennifer Dill
DIAGNOSTICS FOR THE AQUATIC PRACTITIONER: SERVICES, OPTIONS, AND ADVICE

11:30 Myron J. Kebus
VETERINARY SERVICES AND SMALL-SCALE TILAPIA FARMS

11:45 Nora Hickey, Myron Kebus, Michael Collins
USING VETERINARIANS TO INCREASE PROFITS IN AQUACULTURE

12:00 David Scarfe
AQUATIC VETERINARY EDUCATION AND CLINICAL COMPETENCY/CERTIFICATION PROGRAMS TO MEET PRODUCER AND REGULATORY NEEDS

12:30 LUNCH

Moderator: A.D. Scarfe

1:30 Kathleen H. Hartman, Lynn H. Creekmore, Christa L. Speekmann
NATIONAL VETERINARY ACCREDITATION PROGRAM (NVAP) – AQUATIC ANIMAL MODULES 13, 14 & 15

3:00 BREAK

THURSDAY

Moderator: TBD

- 3:30 Dragan Momcilovic**, David Edwards, Sharon Benz
VETERINARY FEED DIRECTIVE REGULATIONS FOR ANIMAL DRUGS
- 4:00 David Scarfe**
DESIGNING AND IMPLEMENTING AQUATIC VETERINARY BIOSECURITY PROGRAMS TO MEET PRODUCER, NATIONAL AND INTERNATIONAL NEEDS
- 4:30 Kathleen Hartman**, Lori Gustafson, Christa Speekmann, Lynn Creekmore, Lauren Harris, Lee Ann Thomas
U.S. COMMERCIAL AQUACULTURE HEALTH PROGRAM STANDARDS (CAHPS)

SHELLFISH DISEASE

Thursday, February 25 8:30 - 5:00 Vendome B
Chairs: Kim Reece, Ryan Carnegie, Roxana Smolowitz

- 8:30 Hyun-Sung Yang**, Do-Hyung Kang, Hyun-Ki Hong, Hee-Jung Lee, Hee-Do Jeung, Kwang-Sik Choi
INTER-ANNUAL VARIATION IN THE REPRODUCTIVE PATTERN OF MANILA CLAM *Ruditapes philippinarum* AND IMPACTS OF *Perkinsus olseni* INFECTION ON THE REPRODUCTION OBSERVED FROM THE WEST COAST OF KOREA
- 8:45 Hye-Mi Lee**, Kwang-Sik Choi, Kyung-Il Park, Hyoun-Joong Kim, Hyun-Sil Kang, Hyun-Ki Hong, Hee-Jung Lee
MONITORING *Perkinsus olseni* INFECTION INTENSITY AND PREVALENCE IN JUVENILE MANILA CLAM *Ruditapes philippinarum* TRANSPLANTED IN INTERTIDAL MUD FLAT AND A CAGE SUSPENDED IN WATER COLUMN
- 9:00 Tsukasa Waki**, Jee-Youn Lee, Young-Ghan Cho, Kwang-Sik Choi
INCREASE IN *Perkinsus olseni* INFECTION IN MANILA CLAMS *Ruditapes philippinarum* TRANSPLANTED FROM LOW TO HIGHER INFECTION AREA ON THE WEST COAST OF KOREA
- 9:15 Kennedy T. Paynter**, Matt Spitznagel, Anne Handschy
WEIGHTED PREVALENCE OF *Perkinsus marinus* (DERMO) INFECTIONS IN HATCHERY-PRODUCED OYSTERS PLANTED ON NATURAL OYSTER BARS IN THE CHESAPEAKE BAY IN RESTORATION EFFORTS ARE CORRELATED WITH THE WEIGHTED PREVALENCE OF NATIVE OYSTERS UPON WHICH THE HATCHERY OYSTERS WERE PLANTED
- 9:30 Ryan Carnegie**, Susan Ford, Rita Crockett, Peter Kingsley-Smith
A RAPID INCREASE IN *Perkinsus marinus* VIRULENCE CAUSED THE HISTORICALLY SIGNIFICANT 1980'S EPIZOOTIC
- 9:45 Eric N. Powell**
WHAT IS GOING ON WITH *Perkinsus marinus* IN THE GULF OF MEXICO?
- 10:00 BREAK**
- 11:00 Marine Fuhrmann**, Bruno Petton, Fabrice Pernet
DISEASE TRANSMISSION AND ASSOCIATED MORTALITIES OF THE PACIFIC OYSTER *Crassostrea gigas*: DOES SALINITY MATTER?

THURSDAY

- 11:15 Jorge Cáceres-Martínez**, Luis Humberto Madero-López, Gloria Padilla-Lardizábal, Rebeca Vásquez-Yeomans
 EPIZOOTIOLOGY AND ENDEMIC CHANNEL OF *Perkinsus marinus*, PARASITE OF THE PLEASURE OYSTER *Crassostrea corteziensis*, IN THE PACIFIC COAST OF MEXICO
- 11:30 Roberto Cruz-Flores**, Montserrat Muñoz-Flores, Jorge Cáceres-Martínez, Rebeca Vásquez-Yeomans, Miguel Angel Del Río Portilla, Mónica Hernández Rodríguez, Axayácatl Rocha Olivares
Candidatus Xenohalotitis californiensis AND ITS HYPERPHAGE IN BLUE AND YELLOW ABALONE OF THE PENINSULA OF BAJA CALIFORNIA, MEXICO
- 11:45 Roberto Cruz-Flores**, Jorge Cáceres-Martínez Cáceres-Martínez, Rebeca Vásquez-Yeomans
 OPTIMIZATION OF THE PROCEDURE TO SEPARATE MEMBRANE BOUND VACUOLES OF *Candidatus Xenohalotitis californiensis* FROM HOST ABALONE TISSUE
- 12:00 Benjamin Morga**, Nicole Faury, Isabelle Arzul, Tristan Renault
 HAEMOCYTES FROM *Crassostrea gigas* AND OSHV-1: A PROMISING *IN VITRO* MODEL TO STUDY HOST/VIRUS INTERACTIONS
- 12:15 Miguel del Rio Portilla**, Fabiola Lafarga-De La Cruz, Carmen Paniagua-Chávez, Francisco J. García-De León
 GENOMIC ANALYSIS AND VIRAL AND TRANSPOSON SEQUENCES IN AQUATIC ORGANISMS
- 12:30 LUNCH**
- 1:30 Timothy Green**, Peter Speck, David Raftos, Michael Beard, Karla Helbig
 EVIDENCE THE PACIFIC OYSTER HAS A TYPE I INTERFERON RESPONSE: IMPLICATIONS FOR DISEASE MANAGEMENT
- 1:45 Antonio Villalba**, Michael J. Metzger, David Iglesias, María J. Carballal, Stephen P. Goff
 AT LEAST TWO CONTAGIOUS CANCER CELL LINEAGES CAN TRANSMIT DISSEMINATED NEOPLASIA IN COCKLES *Cerastoderma edule*
- 2:00 Roxanna Smolowitz**, Catherine Grimm, Carl Huntsberger
 MYCOBACTERIAL sp. INFECTIONS IN SEA SCALLOPS *Placopecten magellanicus* FISHED FROM U.S. WATERS IN THE NORTHWEST ATLANTIC
- 2:15 Hyun-Sil Kang**, Naoki Itoh, Kwang-Sik Choi
 FIRST REPORT OF *Marteilia* sp. INFECTION IN MANILA CLAM *Ruditapes philippinarum* ON SOUTHERN COAST OF KOREA
- 2:30 Isabelle Arzul**, Delphine Serpin, Cyril Maingourd, Helene Boulet, Nicolas Keck, Hannah Stagg, Eann Munro, Michele Civettini, Giuseppe Arcangeli, Deborah Cheslett, Paul Savage, Christine Dubreuil, Celine Garcia, Lydie Canier
 A MULTIPLEX REAL-TIME PCR ASSAY FOR THE DETECTION AND TYPING OF *Marteilia refringens*

- 2:45 Isabelle Arzul**, Laury Baillon, Bruno Chollet, Christine Dubreuil, Celine Garcia, Purotu Heloury, Mathieu Hussenot, Delphine Serpin, Stephane Pouvreau
DIFFERENTIAL DYNAMICS OF *Bonamia ostreae* AND *Marteilia refringens* IN A SAME POPULATION OF FLAT OYSTER *Ostrea edulis* IN RADE DE BREST, BRITTANY, FRANCE
- 3:00 BREAK**
- 3:30 Timothy Bowden**, Nicole Messerman, Jacob Sicotte, Jeffrey Vigue, Grant Dickey
PREVALENCE OF THE OYSTER PARASITE *Haplosporidium nelsoni* IN COMMERCIAL AND NATURAL-BED POPULATIONS OF THE EASTERN OYSTER *Crassostrea virginica* IN THE DAMARISCOTTA ESTUARY, MAINE
- 3:45 Gorka Bidegain**, John Klinck, Julia Levin, Eric Powell, Eileen Hofmann, Dale Haidvogel
A COUPLED BENTHIC-CIRCULATION MODEL FOR DERMO DISEASE IN THE EASTERN OYSTER *Crassostrea virginica*
- 4:00 Bhagat Lal Dutta**, Coralie Lupo, Sébastien Petton, Pauline Ezanno, Marie-Agnès Travers, Delphine Tourbiez, Julien Normand, Aline Gangnery, Fabrice Pernet, Cédric Bacher
SUMMER MORTALITY IN PACIFIC OYSTER: A METAPOPOPULATION MODEL OF *Vibrio aestuarianus* INFECTION

BUILDING SOCIAL ACCEPTANCE THROUGH INNOVATIVE COMMUNICATION

Thursday, February 25 11:00 - 12:30 Burgundy
Chair: Linda Heimstra

The aquaculture industry has often used science to defend its position as a socially responsible and environmentally conscious industry. The science based message has not always resonated with the general public and as a result the fear messaging of some anti-industry groups is widely accepted as the truth about the industry. This session will explore alternative methods of communicating to gain wider acceptance of the industry and greater understanding of the important role aquaculture has in food production.

- 11:00 Jeremy Dunn**
BUILDING TRUST: GAINING INDUSTRY ACCEPTANCE IN AQUACULTURE
- 11:15 Ekaterina Prasolova-Forland**, Anders Boe
POPULARIZING AQUACULTURE WITH VIRTUAL REALITY: A NORWEGIAN EXAMPLE
- 11:30 Rick Moonen**
THE ROLE OF SERVING SUSTAINABLY SOURCED SEAFOOD IN BUILDING ACCEPTANCE OF AQUACULTURE PRODUCTS
- 11:45 Gudmundur Stefansson**, Kolbrun Sveinsdottir, Valur N. Gunnlaugsson
THE PRIMEFISH PROJECT – LINKING THE NEEDS OF THE PRODUCER, RETAILER AND CONSUMER
- 12:00 John Nickum**
SOCIAL ACCEPTANCE OF AQUACULTURE: THE POLITICS OF FACTS VERSUS BELIEFS
- 12:15 DISCUSSION**

MANAGING THE GENETIC RISK OF ESCAPES FROM AQUACULTURE

Thursday, February 25 1:30 - 5:00 Burgundy

Chairs: Ingrid Burgetz, Kristen Gruenthal

- 1:30 Dounia Hamoutene**, Curtis Pennell, Kimberly Burt, Dwight Drover, Shayne McDonald, Brian Dempson, Geoff Perry, Keith Clarke
MOVEMENT AND DISPERSAL OF FARMED ATLANTIC SALMON *Salmo salar* FOLLOWING SIMULATED ESCAPES IN FORTUNE BAY, NEWFOUNDLAND (CANADA)
- 1:45 Einar Eg Nielsen**, AquaTrace Consortium
AQUATRACE: PROVIDING MOLECULAR TOOLS FOR ASSESSING AND MONITORING POTENTIAL GENETIC IMPACT OF AQUACULTURE ON NATIVE POPULATIONS
- 2:00 Ian Bradbury**, Lorraine Hamilton, Geoff Perry, Carole Grant, Martha Robertson, Brian Dempson
GENOMIC TOOLS TO QUANTIFY THE DIRECT GENETIC IMPACTS OF ESCAPED FARMED ATLANTIC SALMON ON WILD POPULATIONS IN EASTERN CANADA
- 2:15 CANCELLED**
- 2:30 Monica Solberg**, Kevin G. Glover, Mikko Heino, Ove T. Skilbrei, Øystein Skaala, Vidar Wennevik, Terje Svåsand
RISK ASSESSMENT OF GENETIC IMPACT OF ESCAPED FARMED SALMON ON WILD POPULATIONS IN NORWAY
- 2:45 Tanya L. Darden**, John D. Robinson, Allen E. Strand, Michael R. Denson
FORECASTING GENETIC IMPACTS OF NET PEN FAILURES ON GULF OF MEXICO COBIA POPULATIONS USING INDIVIDUAL-BASED MODELING
- 3:00 BREAK**
- 3:30 Kristen Gruenthal**, Gregory Blair, Jason Volk, Gavin Key, Michael Rust
EXPLORING THE FITNESS RISK POSED BY ESCAPES FROM MARINE AQUACULTURE: THE OMEGA MODEL
- 3:45 DISCUSSION**

THURSDAY

AES PROGRAM

Thursday, February 25 1:30 - 5:45 Versailles 3

Chairs: Todd Guerdat, Astrid Buran Holan

- 1:30 Jelena Kolarevic**, Rune Iversen, Svein Martinsen, Per Gunnar Kvenseth, Bendik Fyhn Terjesen
PRODUCTION OF ATLANTIC SALMON POST-SMOLTS *Salmo salar* IN FLEXIBAG SEMI-CLOSED CONTAINMENT SYSTEM
- 1:45 John Davidson**, Christopher Good, Gregory Weber, Christina Russell, Steven Summerfelt
COMPARING THE EFFECTS OF “HIGH” (100 mg/L) VERSUS “LOW” (10 mg/L) NITRATE-NITROGEN ON POST-SMOLT ATLANTIC SALMON *Salmo salar* PERFORMANCE AND PHYSIOLOGY IN RECIRCULATION AQUACULTURE SYSTEMS
- 2:00 Sara Calabrese**, B. Sævareid, O. Breck, R. Joensen, T.O. Nilsen, J. Kolarevic, S. Fivelstad, H. Takle, C. Hosfeld, L.O.E. Ebbesson, S. Stefansson, B.F. Terjesen, S.O. Handeland
SEMI-CLOSED SEA SYSTEMS FOR POST-SMOLT ATLANTIC SALMON
- 2:15 Astrid Buran Holan**, Jelena Kolarevic, Bendik Fyhn Terjesen
EVALUATION OF MEMBRANE TREATMENT EFFECT ON WATER QUALITY IN RECIRCULATING AQUACULTURE SYSTEMS (RAS) FOR ATLANTIC SALMON POST-SMOLTS *Salmo salar*
- 2:30 Cristian Cifuentes**, M.H. Kim
INFLUENCE OF WAVE KINEMATICS STRETCHING METHODS ON FORCES OVER A CAGE UNDER REGULAR WAVES AND CURRENT
- 2:45 Chun Woo Lee**, Jihoon Lee, Subong Park, Gebremeskel Kebede
EXPERIMENTAL AND NUMERICAL INVESTIGATION OF DIFFERENT MOORING SYSTEMS ON STABILITY OF THE FISH CAGE
- 3:00 BREAK**
- 3:30 Steven Hall**, Jeanne Steyer, Melody Thomas
COASTAL BIOENGINEERED REEFS AND ENGINEERED CAGE CULTURE TO GROW EASTERN OYSTERS *Crassostrea virginica* FOR FOOD AND COASTAL PROTECTION RESTORATION
- 3:45 Daury Garcia-Pulido**, Arturo Gonzalez-Rodriguez, Ivan Gallego-Alarcon
THE USE OF CONSTRUCTED WETLANDS FOR THE TREATMENT OF AQUACULTURE WASTEWATER IN THE MEXICAN HIGHLANDS
- 4:00 Todd Guerdat**, James M. Ebeling
ENGINEERING DESIGN CONSIDERATIONS FOR RECIRCULATING AQUAPONICS SYSTEMS (RAqS) TO MAXIMIZE PRODUCTIVITY AND ECONOMIC VIABILITY
- 4:15 Traci S. Bell**, Craig M. Bell, James M Ebeling, Michael B Timmons
RESEARCHING ECONOMIC FEASIBILITY OF THE “MIXED CELL RACEWAY”, PROVIDING A PATHWAY FOR SMALL FARMS TO ENTER THE AQUACULTURE INDUSTRY

THURSDAY

- 4:30 Daniel D. Smith**, Amanda M. Taylor, Andrew J. Tykol, Callie L. Silvia, Sean S. Cotlar, Steven G. Hall
AQUACULTURAL APPLICATIONS OF AN AUTONOMOUS AQUATIC BIOMASS COLLECTOR
- 4:45 Marlon Greensword**, Steve Hall, Ronald Malone
EVALUATION OF RICE HULLS AS A BIO-CARRIER FOR A THREE PHASE BIOREACTOR
- 5:00 Ronel S. Pangan**, Kevin F. Yaptenco, Sharmaine N. Pardia, Jonnel Andrew C. Duque
ENHANCING THE PHILIPPINE SEA CUCUMBER INDUSTRY THROUGH THE DEVELOPMENT OF AN APPROPRIATE PROCESSING TECHNOLOGY
- 5:15 Tzolkin Rossel-Mendoza**, Iván Gallego-Alarcón, Daury García-Pilido
EFFECT OF TROPHIC ENVIRONMENT IN TAN REMOVAL EFFICIENCY IN A FRACTAL FILTER MEDIA (UAE-Mex-1)
- 5:30 Paul S. Wills**, Timothy Pfeiffer, Richard Baptiste, and Barnaby Watten
FLUIDIZED BED ARAGONITE REACTOR FOR CONTROL OF ALKALINITY, pH AND CARBON DIOXIDE IN MARINE RECIRCULATING AQUACULTURE SYSTEMS

FINFISH GENETICS

Thursday, February 25 1:30 - 5:00 Concorde A

Chair: Madison (Matt) Powell

- 1:30 Catherine Purcell**, Elizabeth Smith, Mark Drawbridge, Kevin Stuart, Andrew Severin, John Hyde
APPLYING GENETIC AND GENOMIC TOOLS TOWARD UNDERSTANDING BROODSTOCK DYNAMICS AND LARVAL DEVELOPMENT IN THE CALIFORNIA YELLOWTAIL *Seriola dorsalis*
- 1:45 Catherine Purcell**, Andrew Severin, Vince Buonaccorsi, Mark Drawbridge, Kevin Stuart, John Hyde
RNA-SEQ ANALYSIS OF LARVAL STAGES OF SLOW- AND FAST-GROWING YELLOWTAIL *Seriola dorsalis*
- 2:00 Boris Gomelsky**, Thomas A. Delomas, Jeffrey L. Warner, Laurel A. Nason
APPEARANCE OF RED EYES IN KOI IS CONTROLLED BY DOMINANT MUTATION WHICH CAUSES ONLY PARTIAL SKIN DEMELANIZATION IN WILD-TYPE COLOR COMMON CARP
- 2:15 Jeffrey Warner**, Boris Gomelsky, Thomas A. Delomas
REPRODUCTIVE ABILITY OF SECOND GENERATION KOI × GOLDFISH HYBRID MALES AND RESULTS OF THEIR CROSSES WITH HYBRID FEMALES
- 2:30 Tracy S. Kennedy**, T. Gibson Gaylord, Wendy M. Sealey, Madison S. Powell
NUTRIGENOMIC BIOMARKERS FOR DIETARY SOYBEAN MEAL UTILIZATION IN RAINBOW TROUT
- 2:45 G. I. Godahewa**, N.C.N. Perera, Jehee Lee
ANTIOXIDANT DEFENSE OF TWO PEROXIREDOXIN MEMBERS FROM BLACK ROCKFISH *Sebastes schlegelii* WITH THEIR MOLECULAR PROFILING AND TISSUE SPECIFIC EXPRESSIONAL PROFILE

3:00 BREAK

- 3:30 Md Mursalin Khan**, SM Ashiquil Islam, Ahmed Mustafa
IDENTIFICATION OF STRESS-RELATED MOLECULAR BIOMARKERS IN ZEBRAFISH:
AN IN-SILICO APPROACH
- 3:45 Sixin Liu**, Yniv Palti, Guangtu Gao, Caird E Rexroad III
A PANEL OF SINGLE NUCLEOTIDE POLYMORPHISM FOR PARENTAGE
ASSIGNMENT IN RAINBOW TROUT
- 4:00 Michael Pietrak**, William Wolters, Caird Rexroad
ADDITION OF A SELECTIVE BREEDING PROGRAM FOR RESISTANCE TO SEA LICE
Lepeophtheirus salmonis TO EXISTING LINES ATLANTIC SALMON *Salmo salar* AT
THE USDA'S NATIONAL COLD WATER MARINE AQUACULTURE CENTER
- 4:15 Gusheinzed Waikhom**, Labee Thoidingjam, Vishwamitra Singh Baisvar,
Sukham Sanjabihari Singh, Ravindra Kumar, Basdeo Kushwaha
GENETIC CHARACTERIZATION OF SELECTED FRESHWATER FISH SPECIES
ENDEMIC TO INDIAN REGION OF THE INDO-BURMA BIODIVERSITY HOT-SPOT
USING ADVANCED CYTOGENETIC MARKERS
- 4:30 N.C.N. Perera**, G. I. Godahewa, Jehee Lee
CuZnSOD, AN ANTIOXIDANT GENE FROM SEAHORSE *Hippocampus abdominalis*;
CLONING, SEQUENCE CHARACTERIZATION, IMMUNE RESPONSE AND
ANTIOXIDANT ACTIVITY OF ITS RECOMBINANT PROTEIN

MACROALGAL EXPLOITATION AND AQUACULTURE

Thursday, February 25 1:30 - 5:45 Concorde C

Chair: Alejandro Buschmann

- 1:30 Alejandro Buschmann**, Carolina Camus, Sandra V. Pereda,
María C. Hernández-González, Robinson Altamirano, Karina Villegas,
José L. Kappes
INTRODUCTION INTO SEAWEED PRODUCTION: CONCEPTS, FARMING AND USES
- 1:45 Peimin He**, Hailong Wu, Yuanzi Huo, Yuanyuan Liu
INDUSTRIAL CHAIN OF PYROPIA AQUACULTURE AND BIOREMEDIATION IN
JIANGSU PROVINCE COASTS, CHINA
- 2:00 Jang Kim**, Miseon Park, Youngdae Kim, Byunghwa Min, Charles Yarish
SEAWEED AQUACULTURE IN KOREA: STATUS AND FUTURE DIRECTIONS
- 2:15 Ji Li**, Patrick Kangas, Daniel Terlizzi
POTENTIAL VALUE OF MACROALGAE CULTIVATION IN THE CHESAPEAKE BAY
AREA
- 2:30 Anoushka Concepcion**, Tessa Getchis, Nancy Balcom, Kristin DeRosia-Banick
IDENTIFYING AND ADDRESSING PROCESS-RELATED CHALLENGES TO THE
EXPANSION OF SEA VEGETABLE AQUACULTURE IN CONNECTICUT

- 2:45** **Jose Zertuche-Gonzalez**, Mariana Sanchez-Barredo, José M. Guzmán-Calderón, Rigoberto Sánchez-Medina, Z. Altamirano-Gomez, Isai Pacheco-Ruíz, Charles Yarish
DOMESTICATION AND MARICULTURE OF THE KELP *Eisenia arborea* (ARESCHOUNG) OFF THE PACIFIC COAST OF BAJA CALIFORNIA, MEXICO
- 3:00** **BREAK**
- 3:30** **Anthony J. Siccardi III**, Nathan D. Huysman, Zachary B. Fuqua, Ryan W. Davis, Cristina M. Richardson, Todd W. Lane
A COMPARISON OF STRUVITE AND TRADITIONALLY USED NUTRIENTS IN 90-DAY, SEMI-CONTINUOUS, MIXED ALGAL CULTURE PRODUCTION TRIALS IN OUTDOOR RACEWAYS
- 3:45** **Lior Guttman**
PERIPHYTON-BASED BIOFILTER FOR MARICULTURE EFFLUENT TREATMENT, POTENTIAL FOR SUSTAINABLE LAND-BASED MARICULTURE
- 4:00** **Julio A. Vásquez**
BROWN SEAWEEDS OF ECONOMIC IMPORTANCE IN NORTHERN CHILE: VALUES OF GOODS AND SERVICES OF THE ECOSYSTEM
- 4:15** **Song Qin**, Zhengyi Liu, Jun Chen
ALGAL BIOMASS TECHNOLOGY AND ALGAL BIO-ECONOMY IN CHINA: CHALLENGES AND PROSPECTS
- 4:30** **Holly Cronin**, Andrew Sellers, Amir Neori
BIOMIMICRY CONSIDERATIONS FOR SEAWEED MARICULTURE: ASSESSING FUNCTIONAL DIVERSITY AT THE LOCAL SCALE
- 4:45** **Charles Yarish**, Jang Kim
NUTRIENT BIOEXTRACTION BY SEAWEED FARMING IN NEW YORK CITY, LONG ISLAND SOUND AND OTHER URBANIZED ESTUARIES IN SOUTHERN NEW ENGLAND
- 5:00** **Sara Barrento**, Carolina Camus, Isabel Sousa-Pinto, Alejandro Buschmann
OVER A DECADE PROMOTING SEAWEEDS AS EFFICIENT INORGANIC NUTRIENT SINKS IN INTEGRATED MULTI-TROPHIC AQUACULTURE (IMTA): NOW WHAT?
- 5:15** **Gayani Dilshara Matharage**, Prasad Jayasooriya, Chang-Hee Kang, Hee-Ju Kim, Yung Hyun Choi, Gi-Young Kim, Prasad Jayasooriya, Chang-Hee Kang, Hee-Ju Kim, Yung Hyun Choi, Gi-Young Kim
RED ALGAE *Polyopes affinis* EXTRACTS IN LPS-INDUCED INFLAMMATORY RESPONSE IN BV2 MICROGLIAL CELLS
- 5:30** **Michael Morrissey**, Jason Ball, Ann Colonna, Sarah Masoni, Cathy Durham, Chris Langdon, Chuck Toombs
DEVELOPMENT OF VALUE-ADDED FOOD PRODUCTS MADE FROM DULSE *Palmaria mollis*

AQUACULTURE 101

Thursday, February 25 1:30 - 5:00 Concorde B

Chair: Kathleen Hartman

- 1:30 Carlos Martinez**
SCHOOL IS IN! CALCULATING COMMON TREATMENTS IN PONDS AND TANKS
- 2:00 Rick Barrows**
DEVELOPMENT OF PLANT-BASED FEEDS FOR FISH
- 2:30 Craig Watson**
ARTIFICIAL SPAWNING TECHNIQUES IN FISH (RATED PG)
- 3:00 BREAK**
- 3:30 Bill Martin**
EXPERIENCES IN AQUACULTURE
- 4:00 Ron Malone**
LAYOUT AND DESIGN OF A RECIRCULATING AQUACULTURE FACILITY
- 4:30 James Morris**
CURRENT MARINE AQUACULTURE PRACTICES

MICROBIAL COMMUNITIES OF SHELLFISH: INFLUENCE OF EXTRINSIC AND INTRINSIC FACTORS, AND POTENTIAL EFFECTS ON THE HOST

Thursday, February 25 1:30 - 4:00 Loire

Chairs: Evan Ward, Melissa Pierce

- 1:30 J. Evan Ward**, Melissa L. Pierce, Bridget A. Holohan, Xiaowei Zhao, Randall E. Hicks
THE INFLUENCE OF SITE AND SEASON ON THE GUT AND PALLIAL FLUID MICROBIAL COMMUNITIES OF THE EASTERN OYSTER *Crassostrea virginica*
- 2:00 Melissa Pierce**, J. Evan Ward
BIVALVES MAINTAIN A CORE GUT MICROBIOME: SEASONAL TRENDS AND SPECIES VARIATION
- 2:15 Timothy Green**, Agnes Vergnes, Julien de Lorgeril, Caroline Montagnani
MICROBIAL COMMUNITIES OF OYSTERS – IMPLICATIONS FOR IMMUNE STATUS AND DISEASE
- 2:30 Wanilada Rungrassamee**, Amornpan Klanchui, Sawarot Maibunkaew, Sage Chaiyapechara, Sithichoke Tangphatsornruang, Pikul Jiravanichpaisal, Nitsara Karoonuthaisiri
EXPLORING BACTERIAL DIVERSITY IN INTESTINES OF THE BLACK TIGER SHRIMP *Penaeus monodon*
- 2:45 Jin-Xing Wang**, Xian-Wei Wang, Xiao-Fan Zhao
A C-TYPE LECTIN INHIBITS PROLIFERATION OF THE HEMOLYMPH MICROBIOTA BY MAINTAINING THE EXPRESSION OF ANTIMICROBIAL PEPTIDES

THURSDAY

3:00 BREAK

3:30 Demin Zhang, Jinbo Xiong, Linglin Qiuqian, Yunxia Qian, Xin Wang
CULTURED SHRIMP HEALTH STATUS IS ASSOCIATED WITH THE COMPOSITION OF AQUATIC AND INTESTINAL BACTERIAL COMMUNITIES

3:45 Norman Meres, Patrick Gillevet, Stephen McClure, Masoumeh Sikaroodi, Jeffrey Shields
NETWORK ANALYSIS OF MICROBIAL COMMUNITIES ASSOCIATED WITH EPIZOOTIC SHELL DISEASE IN THE AMERICAN LOBSTER *Homarus americanus*

STRIPED BASS GROWERS ASSOCIATION INDUSTRY FORUM

Thursday, February 25 1:30 - 5:30 Versailles 2

Chair: Tyler Faucette

THURSDAY

1:30 Mike Freeze
UPDATES FROM THE NATIONAL AQUACULTURE ASSOCIATION

1:45 Delbert M. Gatlin III
UPDATE ON HYBRID STRIPED BASS NUTRITION RESEARCH AT TEXAS A&M UNIVERSITY

2:00 Steven D. Rawles
RECENT FISH NUTRITION RESEARCH AT SNARC

2:15 Kathleen Hartman
COMMERCIAL AQUACULTURE HEALTH PROGRAM STANDARDS (CAHPS)

2:30 Adam Fuller
HYBRID STRIPED BASS BREEDING PROGRAM

2:45 Ron Hardy
MOVING TOWARDS SUSTAINABLE STRIPED BASS FEEDS

3:00 Anita Kelly
2015 U.S. HYBRID STRIPED BASS INDUSTRY SURVEY

3:15 Linda O'Dierno
UNDERSTANDING THE MARKET – THE KEY TO A SUCCESSFUL BUSINESS

3:30 SBGA ANNUAL MEMBERS MEETING

4:00 SBGA BOARD OF DIRECTORS MEETING

MARINE FINFISH

Thursday, February 25 3:30 - 5:30 Champagne 2

Chair: Michael Schwarz

- 1:30 Michael Schwarz**
DEVELOPMENT OF HATCHERY STRATEGIES FOR EMERGING MARINE FINFISH
- 2:00 Jonathan Lee**, Rachel S. Poretzky, Matthew A. Cook, Jose Reyes-Tomassini, Barry A. Berejikian, Frederick W. Goetz
DMSP INCREASES SURVIVAL OF LARVAL SABLEFISH *Anoplopoma fimbria*
- 2:15 Maria Celia Portella**, Thiago M. Freitas, Luiz Flávio J. Santos, Caroline C. Santana, Adriano M. Gonçalves, Rafael R. Colosio, Gabriela C. Pavarina, João M. Pizauro
DIGESTIVE ENZYMATIC ACTIVITY ON *Piaractus mesopotamicus* LARVAE DURING EARLY LIFE STAGE AND UNDER DIFFERENT REARING PROTOCOLS
- 2:30 Christopher Green**, Emily Babl
EGG PRODUCTION IN GULF KILLIFISH *Fundulus grandis* AT VARYING ENVIRONMENTAL SALINITIES
- 2:45 Marlien Schaeck**, Ward De Spiegelaeere, Jurgen De Craene, Freddy Haesebrouck, Wim Van Den Broeck, Annemie Decostere, De Spiegeleer Bart, Christian Burvenich
LASER CAPTURE MICRODISSECTION OF INTESTINAL TISSUE FROM EUROPEAN SEA BASS LARVAE
- 3:00 BREAK**
- 3:30 Reginald B. Blaylock**, Adam Daw, Eric A. Saillant, Jeff Lotz
OPTIMIZING PROTOCOLS FOR USING COPEPODS AS LIVE FEEDS
- 3:45 Matt Hawkyard**, Kevin Stuart, Mark Drawbridge, Chris Langdon
DEVELOPMENT OF ALGINATE COMPLEX PARTICLES AND THEIR USE FOR EVALUATING COMPOUNDS THAT ENHANCE FEEDING BY MARINE FISH LARVAE.
- 4:00 Aaron Porterfield**, Nicole Rhody, Kevan Main, Nathan Brennan
EFFECTS OF SALINITY ON AGGRESSIVE AND CANNIBALISTIC BEHAVIOR IN POST-LARVAL COMMON SNOOK *Centropomus undecimalis*
- 4:15 Cristian Martínez**, Saúl Hernández, Ricardo Toscano, Nathan Brennan, Kevan Main, Carlos Yanes-Roca, Carlos Martínez-Palacios
COMPENSATORY GROWTH OF BLACK SNOOK *Centropomus nigrescens* JUVENILES UNDER TWO DIFFERENT SALINITIES
- 4:30 John Stieglitz**, Ronald Hoenig, Carlos Tudela, Steven Kloeblen, Martin Grosell, Daniel Benetti
OPTIMIZATION OF MAHI-MAHI *Coryphaena hippurus* AQUACULTURE THROUGH PHYSIOLOGICAL AND BIOENERGETICS RESEARCH
- 4:45 Pablo Fuentes**, Benjamin Baron-Sevilla, Juan P Lazo
EFFECT OF FEED QUALITY DURING THE LARVAL STAGE IN THE GROW-OUT PERFORMANCE OF *Totoaba macdonaldi* JUVENILES
- 5:00 Gabriela Gaxiola**, Xavier Chiappa, Eduardo Pacheco
METHODS OF GROWTH EVALUATION OF JUVENILES OF *Centropomus undecimalis* IN EXPERIMENTAL CONDITION

THURSDAY

FRIDAY, February 26

TEMPERATE BASSES

Friday, February 26 8:30 - 10:00 Vendrome A

Chair: Benjamin Reading

- 9:00 Scott A. Salger**, Katherine R. Cassady, Benjamin J. Reading
CHARACTERIZATION OF A FAMILY OF THE PISCIDIN HOST DEFENSE PEPTIDES IN THE STRIPED BASS *Morone saxatilis* AND WHITE BASS *Morone chrysops*
- 9:15 Linas Kenter**, Adrienne Kovach, Curry Woods, Benjamin Reading, David Berlinsky
A STRAIN COMPARISON OF STRIPED BASS CULTURED IN RECIRCULATING SYSTEMS AT DIFFERENT SALINITIES
- 9:30 Benjamin Reading**, Robert Clark, Michael Hopper, David Berlinsky, Linas Kenter, Ronald Hodson, Andrew McGinty
ORGANIZED GROUP-SPAWNING OF DOMESTICATED STRIPED BASS *Morone saxatilis*

FRIDAY

FINFISH NUTRITION - CONTINUED

Friday, February 26 8:30 - 10:00 Champagne 3

Chairs: Gibson Gaylord, Rebecca Lochmann, Yathish Ramena

- 8:30 Gary Burr**, William Wolters, Stephen Owen, Daniel Benetti, Frederic Barrows
USE OF MOIST DIETS FOR ATLANTIC SALMON *Salmo salar* WHEN TRANSITIONING FROM FRESH TO SEA WATER
- 8:45 John Bowzer**, Michael Page, Jesse Trushenski
EXTRUSION TEMPERATURE AND PELLET SIZE INTERACT TO INFLUENCE GROWTH PERFORMANCE OF HYBRID STRIPED BASS FED INDUSTRIALLY COMPOUNDED AQUAFEEDS
- 9:00 Neil Sims**, Gavin Key, Dale Sarver
FARMING FINNED BISON ON THE BLUE PRAIRIE: THE SWOT OF HERBIVOROUS MARINE FISH, AS EXEMPLIFIED BY KYPHOSIDAE (CHUBBS)
- 9:15 Sungchul C. Bai**, Seunghan Lee
NUTRITIONAL RESEARCH OF OLIVE FLOUNDER *Paralichthys olivaceus* FOR THE LAST 20 YEARS IN KOREA

AQUACULTURE WITHOUT FRONTIERS

Friday, February 26 8:30 - 10:00 Champagne 1

Chair: Roy Palmer

- 8:30 Paul Wills**
AN INTRODUCTION TO FAU AND NEW COLLABORATION WITH AwF
- 8:45 Marty Riche**
FARMER TO FARMER ACTIVITY
- 9:00 Antonio Garza de Yta**
AwF AND LATIN AMERICA
- 9:15 Roy Palmer**
AwF UPDATE

USTFA INDUSTRY FORUM

Friday, February 26 8:30 - 10:00 Concorde A

Chair: Gary Fornshell

- 8:30 Gregory D. Wiens**
PRODUCTION-SCALE FARM EVALUATION OF THE ARS-FP-R LINE OF BCWD RESISTANT RAINBOW TROUT
- 8:45 Ken Overturf**
IMPROVING GROWTH AND UTILIZATION OF PLANT-BASED FEEDS IN RAINBOW TROUT
- 9:00 Jeffrey M. Hinshaw**
CHALLENGES AND SOLUTIONS IN THE EASTERN U.S. TROUT INDUSTRY – STATUS AND EMERGING ISSUES
- 9:15 Gary Fornshell**
CHALLENGES AND SOLUTIONS IN THE WESTERN U.S. TROUT INDUSTRY – STATUS AND EMERGING ISSUES
- 9:30 Sean Nepper**
UNITED STATES TROUT FARMERS ASSOCIATION BUSINESS MEETING

AQUACULTURE AND CONTAMINANTS

Friday, February 26 8:30 - 12:30 Champagne 2

Chair: Aswani Volety

- 8:30 Aswani Volety, Julien Vignier, John Roberts, Ai Ning Loh, Myrina Boulais, Ben Woodall, Philippe Soudant, Fu-Lin Chu, Lesli Haynes, Jeff Morris, Claire Lay, Michelle Krasnec, Joshua Lipton**
EFFECTS OF DEEPWATER HORIZON OIL AND DISPERSANTS ON VARIOUS LIFE STAGES OF OYSTERS *Crassostrea virginica*
- 8:45 CANCELLED**

- 9:00 Jana Pickova**
LIPIDS AND OMICS IN AQUACULTURE
- 9:15 Salma Sultana**, Fakhira Jabeen, Tayyaba Sultana, Shahid Mahboob Rana
DNA FRAGMENTATION IN DIFFERENT FISH SPECIES: A POLLUTION ASSESSMENT TOOL FOR AQUATIC TOXICOLOGY
- 9:30 Shahid Rana**, Ghazala Ghazala, Khalid Al-Ghanim
CHOLINESTERASES: CHOLINERGIC BIOMARKERS FOR THE DETECTION OF SUBLETHAL EFFECTS OF ORGANOPHOSPHOROUS AND CARBAMATES IN *Catla catla*
- 9:45 Giulia Chemello**, Leonardo Mancini, Jessica de Almeida Roger, Massimiliano Magro, Davide Baratella, Emanuela Bonaiuto, Giuseppe Radaelli, Anna Paola Fifi, Stefania Morandi, Daniela Bertotto, Sabrina Mantilacci, Fabio Vianello, Ike Olivotto
NANOTECHNOLOGY AS A NEW METHOD FOR ANTIBIOTIC MANAGEMENT IN AQUACULTURE
- 10:00 BREAK**
- 10:30 Rafael Cuevas Uribe**, Steven Mims
BIOACCUMULATION OF CONTAMINANTS IN MARKET-SIZE HYBRID STRIPED BASS GROWN IN RECLAIMED WATER
- 10:45 Dong-Fang Deng**, Weifang Wang, Silas Hung
EFFECT OF DIETARY SELENOMETHIONINE ON JUVENILE WHITE STURGEON *Acipenser transmontanus*: RESPONSE OF STRESS PROTEIN (HSP70) AND APOPTOSIS (CASPASE 3/7)

FRIDAY

INCREASING PROFITABILITY THROUGH BETTER ANIMAL HEALTH

Friday, February 26 8:30 - 12:30 Concorde B

Chair: Kathleen Hartman

- 8:30 Carole Engle**
ECONOMICS OF HEALTH
- 9:00 Jim Parsons**
AQUATIC CERTIFICATION AND COMPARTMENTALIZATION PROCESS AS IT RELATES TO SALMONID EGG EXPORT
- 9:30 Hugh Mitchell**
IS IT COST-EFFECTIVE TO TRY VACCINATING MY FISH...OR NOT? HOW DO I DECIDE?
- 10:00 BREAK**
- 10:30 Joe Pawlak**
THE SECRET COSTS OF IGNORING FISH HEALTH – A PRODUCER’S PERSPECTIVE

- 11:00 Jonathan van Senten**
ECONOMIC ANALYSIS OF POTENTIAL EFFECTS OF A FEDERAL MODEL OF AQUATIC ANIMAL HEALTH ON THE U.S. BAIT AND SPORTFISH INDUSTRY
- 11:30 David Straus**
TREATING CATFISH DISEASES: WALKING THE LINE BETWEEN EXCESS AND MODERATION

EVALUATING NATURAL RESOURCE USE IN AQUACULTURE

Friday, February 26 8:30 - 12:30 Burgundy

Chair: Aaron McNevin

- 8:30 Randall Brummett**
EFFICIENCY IN AQUACULTURE
- 8:45 Ahmed Kablan**
HUMAN NUTRITION AND NATURAL RESOURCE IMPLICATIONS IN AQUACULTURE
- 9:00 Stephanie Rakels**
THE ROLE OF AQUACULTURE INNOVATION IN THE CONSERVATION OF NATURAL RESOURCES
- 9:30 Tinh Huynh Quoc**
PRODUCTIVITY AND NATURAL RESOURCE DEPENDENCE IN THE VIETNAMESE SHRIMP AQUACULTURE SECTOR
- 9:45 Rawee Viriyatum**
NATURAL RESOURCE USE FOR SHRIMP AQUACULTURE IN THAILAND
- 10:00 BREAK**
- 10:30 Carole Engle**
THE BUSINESS CASE FOR ENVIRONMENTALLY SUSTAINABLE AQUACULTURE PRODUCTION
- 10:45 Francisco Saraiva Gomes**
NATURAL RESOURCE SUSTAINABILITY AND PRESERVATION OF FINANCIAL CAPITAL IN AQUACULTURE
- 11:00 DISCUSSION**
- 11:15 Claude E. Boyd**
RESOURCE USE – AQUACULTURE-ENVIRONMENTAL TRADE-OFFS
- 11:30 John Hargreaves**
ECOSYSTEM SERVICE TRADEOFFS IN AQUACULTURE
- 11:45 DISCUSSION**
- 12:00 Shivaun Leonard**
CHALLENGES OF KEY INDICATORS EFFECTING EFFICIENCIES OF SMALL SCALE AND COMMERCIAL FISH FARMERS IN AFRICA
- 12:15 Claude E. Boyd**
ADDRESSING NATURAL RESOURCE USE EFFICIENCY IN AQUACULTURE CERTIFICATION

MODELING COASTAL AQUACULTURE FOR SITING AND MANAGEMENT

Friday, February 26 8:30 – 12:30 Concorde C

Chairs: James Morris, Joao Ferreira

- 8:30 Kenneth Black**, Trevor Carpenter, Kevin Black
PREDICTING BENTHIC EFFECTS FROM MARINE CAGE AQUACULTURE – NEW DEPOMOD
- 8:45 Kenneth Riley**, J.E. Jack Rensel, Carol Price, James Morris
AN ENVIRONMENTAL MODEL FOR AQUACULTURE IN THE DEEP OCEAN – ESTIMATING THE FATE OF WASTE NUTRIENTS AND PARTICULATES
- 9:00 Fred Page**, Susan Haigh, Blythe Chang, Randy Losier
APPLICATION OF COASTAL OCEANOGRAPHIC TRANSPORT, DISPERSAL AND DEPOSITION MODELS TO FINFISH AQUACULTURE REGULATION IN ATLANTIC CANADA
- 9:15 Lars Asplin**, Ingrid A. Johnsen, Øivind Strand
MODELING FOR DECISION MAKING OF SITING AND MANAGEMENT IN NORWEGIAN AQUACULTURE
- 9:30 James Morris**, Kenneth L. Riley, J.E. Jack Rensel
MODELING OFFSHORE AQUACULTURE IN THE SOUTHERN CALIFORNIA BIGHT: APPLICATION OF AQUAMODEL FOR THE LARGEST PROPOSED FISH FARM IN THE U.S.
- 10:00 BREAK**
- 10:30 Joao G. Ferreira**, Heather Moore, Patrick Boylan, Catherine Jordan, João D. Lencart-Silva, Ciaran McGonigle, Sarah McLean, João P. Nunes, Matt Service, Changbo Zhu
BEYOND THE HIGH WATER MARK: APPLICATION OF AN ECOSYSTEM MODEL FRAMEWORK FOR INTEGRATED CATCHMENT MANAGEMENT IN LOUGH FOYLE
- 10:45 Jon Grant**, Jeff Barrell, Francisco Bravo, Anne McKee
THE INTEGRATION OF HABITAT INTO MANAGEMENT MODELS OF AQUACULTURE ECOSYSTEMS
- 11:00 Eric Chapman**, Carrie Byron, Di Jin, Tracey Dalton
DETERMINING SYSTEM CARRYING CAPACITY FOR SUSTAINABLE RESOURCE MANAGEMENT USING AN INTEGRATED ECOLOGICAL-ECONOMIC MODELING FRAMEWORK
- 11:15 DISCUSSION**

FRIDAY

ONE HEALTH EPIGENOMICS: FROM SEDIMENT TO PEOPLE

Friday, February 26 8:30 - 3:00 Chablis

Chair: Acacia Alcivar-Warren

The goal of the “ONE HEALTH Epigenomics: From Sediment to People” session is to start a dialogue between ecologists, plant and animal scientists, shrimp industry, and public health professionals about the need to incorporate environmental epigenomics tools in long-term assessments of health risks.

Moderators: Chika Ikeogunau, Maria Leticia Arenas, Raquel Silveira, Amutha Chinnaiah, Acacia Alcivar-Warren, Sonia Soto-Rodriguez

8:30 Acacia Alcivar-Warren

WELCOME / INTRODUCTION - RECOGNITION TO WINNERS OF 'JOHNNIE CASTRO MONTEALEGRE AWARDS', AND COMMENTS ABOUT HEALTH CONSIDERATIONS REGARDING HORIZONTAL TRANSFER OF MICROBIAL TRANSGENES PRESENT IN GENETICALLY MODIFIED CROPS, AND THE RISKS OF USING *Bacillus thuringiensis* FOR MOSQUITO CONTROL NEAR SHRIMP FARMS

8:45 Acacia Alcivar-Warren, Jennifer Ninghuiyi Warren, Mulan Yang
ONE HEALTH Epigenomics - A GLOBAL EDUCATIONAL INITIATIVE

9:00 Diego Alejandro Tigreiro, Acacia Alcivar-Warren, Miriam Alcivar Arteaga, Carlos Mejia, Jorge Romero, Gober Asuncion, Mayra Galindo, Sofia Figueroa Zambrano, Oscar Jaen, Christian Saltos, Daniela Espinoza, Christian Alcivar Navarrete
TESTING GLYPHOSATE, *Bacillus thuringiensis*, MICROBIAL TRANSGENES PRESENT IN GENETICALLY MODIFIED CROPS, METALS AND OTHER CONTAMINANTS OF CONCERN ASSOCIATED WITH MICROCEPHALY & NEURAL TUBE DEFECTS, IN SEDIMENT OF MANGROVES AND SHRIMP PONDS – A LONG-TERM ASSESSMENT OF HEALTH RISKS TO THE ENVIRONMENT AND ANIMALS IN LIGHT OF CLIMATE CHANGE

9:15 Amutha Chinnaiah, Abhijit Manna, Periasamy Subramanian
EXPERIMENTAL EVIDENCES OF GLYPHOSATE HERBICIDE IN *Oreochromis mossambicus* AND ITS BIOREMEDIATION THROUGH ENZYME-NANOPARTICLE CONJUGATES

9:30 Chika Ikeogunau
EPIGENETIC MODIFICATIONS INDUCED BY ENDOCRINE DISRUPTING CHEMICALS (EDCs) PRESENT IN SOIL, SEDIMENT OF MANGROVES AND SHRIMP PONDS, SHELLFISH, FISH AND PEOPLE FROM TROPICAL COUNTRIES – AN IN-DEPTH LITERATURE REVIEW

10:00 BREAK

Moderators: Chika Ikeogunau, Maria Leticia Arenas, Raquel Silveira, Amutha Chinnaiah, Acacia Alcivar-Warren, Sonia Soto-Rodriguez

10:30 Sonia Soto-Rodriguez, Bruno Gomez-Gil, J. Leon-Felix, A. Garcia-Gasca, A. Vargas-Aguilar, M. del Valle-Herrera, R. Lozano-Olvera
DYNAMIC OF *Vibrio parahaemolyticus* AND PirA AND PirB TOXINS DURING THE INFECTIOUS PROCESS OF ACUTE HEPATOPANCREATIC NECROSIS DISEASE (AHPND) IN *Litopenaeus vannamei*

FRIDAY

11:00 Xiaojun Zhang, Jianbo Yuan, Chengzhang Liu, Fuhua Li, Jianhai Xiang
GENOME SEQUENCING OF THE PACIFIC WHITE SHRIMP *Litopenaeus vannamei*

11:15 Weidong Bao, Kenji K. Kojima, Oleksiy Kohany
HOW IT WORKS: REPBASE UPDATE AND REPBASE REPORTS

11:45 Jianbo Yuan, Xiaojun Zhang, Chengzhang Liu, Fuhua Li, Jianhai Xiang
HORIZONTALLY TRANSFERRED GENES IN THE GENOME OF PENAEOIDEA SHRIMPS *Litopenaeus vannamei* AND *Fenneropenaeus chinensis*

12:00 Acacia Alcivar-Warren, Sonia Soto-Rodriguez, Jianhai Xiang, Bruno Gomez-Gil, Jian-Bo Yuan
TRANSGENERATIONAL EPIGENETIC INHERITANCE (TgEI) AND HORIZONTAL GENE TRANSFER (HGT): THE TRANSPOSASES OF EMS-CAUSING VIBRIOS (*Vibrio parahaemolyticus*, *V. harveyi*), MICROBIAL TRANSGENES (*Bacillus thuringiensis*), AND SPF *Litopenaeus vannamei* FROM HAWAII, USA

12:30 LUNCH

Moderators: Chika Ikeogunau, Maria Leticia Arenas, Raquel Silveira, Amutha Chinniah, Acacia Alcivar-Warren, Sonia Soto-Rodriguez

1:30 Ricardo Perez-Enriquez, A.P. Medina-Espinoza, A.M. Millán-Márquez, P. Cruz-Hernández, C.J. Saucedo-Barrón
IS THERE A GENETIC TRACE OF SHRIMP AQUACULTURE ON WILD POPULATIONS IN MEXICO?

1:45 Acacia Alcivar-Warren
PRELIMINARY EVIDENCE OF GENOME REARRANGEMENTS IN SPF *Litopenaeus (Penaeus) vannamei* OF THE UNITED STATES AFTER INTRODUCTION OF WSSV-RESISTANT STOCKS FROM MEXICO

2:15 Diego Alejandro Tigrero, Acacia Alcivar-Warren
MEETING WITH COLLABORATORS OF THE 'ONE HEALTH Epigenomics EDUCATIONAL INITIATIVE', TO DISCUSS A COHORT FOR LONG-TERM RESEARCH TO TEST THE HYPOTHESIS THAT EDCs ARE ASSOCIATED WITH DIABETES AND NEURAL TUBE DEFECTS.

CATFISH AND CATFISH HYBRIDS

Friday, February 26 8:30 - 3:00 Versailles 2

Chairs: Luke Roy, Nagaraj Chatakondi

8:30 Herbert E. Quintero Fonseca, D. Allen Davis
BROODSTOCK NUTRITION: ENHANCEMENT OF EGG QUALITY IN CHANNEL CATFISH FOR HYBRID CATFISH PRODUCTION

8:45 Sheng Dong, Dayan A. Perera, Ahmed S. Alsaqufi, Ramjie Y. Odin, Guyu Qin, Rex A. Dunham
COMPARISON OF TWO STRAINS OF CHANNEL CATFISH *Ictalurus punctatus* FOR INDUCED OVULATION IN THE EARLY SPAWNING SEASON TO PRODUCE CHANNEL CATFISH *Ictalurus punctatus* ♀ × BLUE CATFISH *Ictalurus furcatus* ♂ HYBRID CATFISH EMBRYOS

- 9:00 Brian Bosworth**, Sylvie Quiniou, Nagaraj Chatakondi
EFFECT OF SEASON AND STRAIN ON TESTES DEVELOPMENT AND SPERM QUALITY IN 5 YEAR OLD MALE BLUE CATFISH
- 9:15 William M. Childress**, Terrence R. Tiersch
FIELD TESTING OF A HIGH-THROUGHPUT MOBILE CRYOPRESERVATION LABORATORY FOR AQUATIC SPECIES
- 9:30 Nagaraj Chatakondi**, Roger Yant, Rex Dunham
INFLUENCE OF STRAIN OF SIRE ON CHANNEL \times BLUE F1 HYBRID CATFISH FRY PRODUCTION AND FINGERLING PERFORMANCE UNDER FARM CONDITIONS
- 10:00 BREAK**
- 10:30 Forrest Wynne**, John Murdock, Rick Murdock
IRRIGATING LATE SUMMER CORN USING CHANNEL CATFISH *Ictalurus punctatus* PRODUCTION POND WATER IN WESTERN KENTUCKY: DEMONSTRATION PROJECT RESULTS
- 10:45 C. Bauer Duke III**, Kayla McCoy, Nathan Stone, Sindhu Kaimal
CATFISH-ONLY *Ictalurus punctatus* STOCKING RATES FOR FERTILIZED FARM PONDS: ARE CURRENT STOCKING RECOMMENDATIONS SUFFICIENT?
- 11:00 Trevor P. Luna**, Jeonghwan Park, Luke A. Roy, Anita M. Kelly
PERFORMANCE EVALUATION OF SPLIT-POND SYSTEMS OPERATED AT TWO DIFFERENT WATER TURNOVER RATES FOR PRODUCTION OF HYBRID CATFISH *Ictalurus punctatus* \times *I. furcatus*
- 11:15 Rex Dunham**, Nagaraj Chatakondi, Terry Hanson, David Drescher, Dalton Robinson, Kamal Gosh, William Bugg
INTEGRATED APPROACHES TO REDUCING INDIVIDUAL VARIABILITY AND PROVIDING YEAR ROUND HARVEST OF CHANNEL-BLUE HYBRID CATFISH
- 11:30 Ahmed Elasad**, Rex Dunham
EVALUATION OF RESISTANCE TO *Ichthyophthirius multifiliis* IN CEGROPIN TRANSGENIC CHANNEL CATFISH *Ictalurus punctatus* AND CHANNEL CATFISH FEMALE \times BLUE CATFISH MALE *Ictalurus furcatus* HYBRIDS
- 11:45 Atim Chelly Okoko**, Chukwuma O. Ofor
EFFECT OF FEEDING AND FEED PREFERENCE ON GROWTH PERFORMANCE OF AFRICAN CATFISH *Clarias gariepinus* FED PELLETTED FEED, SUPPLEMENTED WITH LIVE TILAPIA *Oreochromis niloticus* FRY IN CONCRETE TANKS
- 12:00 Ahmed Elasad**, Rex Dunham, Karim Khalil
INDUCED MUTATIONS IN TICAM 1 GENE OF CHANNEL CATFISH *Ictalurus punctatus*
- 12:30 LUNCH**
- 1:30 Suguna Tummala**
BREEDING SEED PRODUCTION AND HATCHERY MANAGEMENT OF ASIAN CAT FISH *Clarias batrachus*
- 1:45 Chika F. Ikeogu**, C.I. Nsofor, I. O. Igwilo, A.A. Ngene
THE EFFECT OF CRUDE OIL ON THE BLOOD PARAMETERS AND SERUM ENZYMES OF THE AFRICAN CATFISH *Clarias gariepinus*

- 2:00 Hakeem Fashina-Bombata**, Ekaete Anwa-Udondiah, Fatai Owodeinde,
IPrince Ndimele, Zainab Ayeni
PROTOCOL FOR BREEDING AND HATCHERY PRODUCTION OF FRY OF SILVER
CATFISH *Chrysichthys nigrodigitatus* (LACEPEDE)
- 2:15 Nermeen Y. Abass**, Rex A. Dunham
COMPARISONS OF CHANNEL CATFISH *Ictalurus punctatus*, BLUE CATFISH
Ictalurus furcatus, AND CHANNEL CATFISH *I. punctatus* ♀ × BLUE CATFISH
I. furcatus ♂ HYBRID FOR TOLERANCE OF HIGH SALINITY
- 2:30 Chika F. Ikeogu**, M.O Okoli, U.M. Adi, J.C. Nwachukwu
GROWTH PERFORMANCE OF *Clarias gariepinus* RAISED WITH COMMERCIAL
CATFISH FEED BRANDED TOP FEEDS UNDER MONO CULTURE SYSTEM IN THE
UNIZIK FARM

WATER QUALITY

Friday, February 26 8:30 - 12:30 Vendome B
Chairs: Ken Semmens, Rafael Cuevas Uribe

- 8:30 Yangxue Han**, Claude E. Boyd
A BICARBONATE TITRATION LIME REQUIREMENT METHOD FOR AQUACULTURE
POND SOILS
- 8:45 Benjaporn Somridhivej**, Claude E. Boyd
AN ASSESSMENT OF FACTORS AFFECTING THE RELIABILITY OF THE TOTAL
ALKALINITY MEASUREMENT
- 9:00 David Straus**, Cynthia Ledbetter, Bradley Farmer, Thomas Meinelt, Dibo Liu
ACUTE TOXICITY OF PERACETIC ACID TO FISH
- 9:15 Mohammad Alam**, Jan Czekajewski, Timothy Hans, Konrad Dabrowski
HYPOXIC THRESHOLD FOR BIGHEAD CARP *Hypophthalmichthys nobilis*
JUVENILES: SIZE DOES REALLY MATTER
- 9:30 Sindhu Kaimal**, Anita M. Kelly
EFFECTS OF CROWDING AND WATER FLOW ON GOLDEN SHINERS *Notemigonus*
crysoleucas IN FLOW TANKS
- 9:45 Lauren Jescovitch**, Claude Boyd
WATER QUALITY MANAGEMENT IN WASTE-TREATMENT SECTIONS OF SPLIT
POND AQUACULTURE
- 10:00 BREAK**
- 10:30 Hisham A. Abdelrahman**, Claude E. Boyd
THERMAL STRATIFICATION IN SHALLOW AQUACULTURE PONDS: RESPONSE TO
TURBIDITY AND AERATION
- 10:45 Kenneth J. Semmens**
TREATED COAL MINE WATER FOR AQUACULTURE: OBSERVATIONS FROM
TWELVE YEARS OF RESEARCH AND DEMONSTRATION

- 11:00 Manuel Segovia**, Juan P. Gonzalez
EFFECT OF FOUR PRETREATMENTS IN THE NITROGEN AND PHOSPHORUS MASS BALANCE FROM EFFLUENTS OF A RECIRCULATING AQUACULTURE SYSTEM
- 11:15 Kenneth Semmens**, Karen Buzby
USE AND REUSE OF A GEOTUBE® TO CAPTURE SOLID WASTE IN A FLOWING WATER SYSTEM
- 11:30 Rick Johnson**
SUSTAINABILITY THROUGH ADVANCED BIOLOGICAL TREATMENT OF RECIRCULATING AQUACULTURE SYSTEM EFFLUENT
- 11:45 Allison Culbreth**, Shawn Shifflett, Dennis Hazel, Elizabeth Nichols, Harry Daniels
EVALUATION OF THE TREATMENT EFFICIENCY OF A HYBRID POPLAR *Populus* spp. VEGETATIVE FILTER ON HYBRID STRIPED BASS *Morone chrysops* × *Morone saxatilis* POND EFFLUENTS

TILAPIA

Friday, February 26 8:30 - 5:00 Versailles 3

Chair: Kevin Fitsimmons

- 8:30 Nassrin Mashaii**, Farhad Rajabipour, Mohammad Mohammadi, Habib Sarsangi, Ahmad Bitaraf, Mostafa Sharif-Rohan, Homayun Hossein-Zadeh
REPRODUCTIVE BIOLOGY OF NILE TILAPIA *Oreochromis niloticus* UNDER THE BRACKISH WATER CULTURE CONDITION, IRAN
- 8:45 Brian Nerrie**, Chris Mullins
PRODUCTION OF OPTIMAL PORTION SIZE FOR HEALTHY AFFORDABLE TILAPIA IN URBAN FOOD DESERT
- 9:00 Suman Bhusan Chakraborty**
EFFECTS OF *Basella alba* LEAF METHANOL EXTRACT AND GENISTEIN ON GROWTH AND NON-SPECIFIC IMMUNE RESPONSE IN *Oreochromis niloticus*
- 9:15 Scott A. Salger**, David A. Baltzegar, Jimi Reza, Md. Abdul Wahab, Russell J. Borski
ASSESSMENT OF PULSED FEEDING STRATEGIES ON THE GUT METAGENOME OF TILAPIA IN POND CULTURE
- 9:30 Veronica Valadez-Rocha**, Alberto Arreola-Valle, Oscar M. Justo Martínez, Omar A. Fragoso Sánchez
WIRELESS SENSOR NETWORKS TO SUPPORT AN INNOVATIVE REMOTE TECHNICAL SERVICE FOR TILAPIA INTENSIVE FARMS IN CENTRAL GULF OF MEXICO
- 9:45 Olunmi T. Agbebi**, Babatunde Ilori, Olutunde Durosaro, Adeola Adegbite, Hamed Ajibade, Oluwatuminu Adebambo, Olanrewaju Adeosun, Joy Echefu, Biola Ajibike
GENETIC DIVERSITY AND POPULATION STRUCTURE OF FOUR TILAPIA FISH SPECIES IN NIGERIA
- 10:00 BREAK**

- 10:30 Ramjie Y. Odin**, Remedios B. Bolivar
CAGE CULTURE OF NILE TILAPIA *Oreochromis niloticus* USING DIFFERENT FEEDING STRATEGIES
- 10:45 Tyler Stoneham**, David Kuhn, Daniel Taylor, Sean O'Keefe, Stephen Smith, Delbert Gatlin
PRODUCTION OF OMEGA-3 ENRICHED TILAPIA THROUGH THE USE OF A COMMERCIALY AVAILABLE *Schizochytrium* sp. ADDITIVE
- 11:00 Zenith Gaye A. Orozco**, Satoshi Soma, Toyoji Kaneko, Soichi Watanabe
RESPONSE OF PEPTIDE TRANSPORTER (SLC 15A1) IN THE INTESTINAL EPITHELIAL CELLS OF TILAPIA *Oreochromis mossambicus* TO FASTING AND REFEEDING
- 11:15 David E. Brune**
TILAPIA IN HIGH-RATE AQUACULTURE PROCESSES
- 11:30 Bartholomew Green**
STOCKING RATE EFFECTS IN A TILAPIA BIOFLOC PRODUCTION SYSTEM
- 11:45 Kevin Fitzsimmons**
SUPPLY AND DEMAND IN GLOBAL TILAPIA MARKETS 2016
- 12:30 LUNCH**
- 1:30 Olalekan R. Oguntade**, Bede C. Okoro, Tope O. Oketoki, Muyiwa Akanmu, Abiola I. Akintayo, Ekaete P. Anwa Udondiah, Esther Ukenye
GENETIC IMPROVEMENT OPTION AND GROWTH PERFORMANCE OF THREE CULTURABLE TILAPIA SPECIES IN A COASTLINE TIDAL FED POND
- 1:45 Md Ibrahim**, Jesse Rinard, Ahmed Mustafa
EFFECTS OF *Phyllanthus niruri* SUPPLEMENTED DIET ON THE MODULATION OF STRESS IN TILAPIA, REARED IN INLAND RECIRCULATING AND AQUAPONICS SYSTEMS
- 2:00 Abdul Mateen**, Noor us Saba
GROWTH, BODY COMPOSITION AND ANTIOXIDANT ENZYMES PROFILE OF *Oreochromis niloticus* AS INFLUENCED BY VITAMIN E FORTIFIED FEED
- 2:15 Md Mursalin Khan**, Destin Furnas, Elliott Blumenhal, Ahmed Mustafa
IN VITRO ANALYSES OF LYMPHOCYTE PROLIFERATION EXTRACTED FROM SPLEEN AND THYMUS OF NILE TILAPIA USING NATURAL ELDERBERRY ALONG WITH MUTAGENS
- 2:30 Esayas W. Tekle**, N. P. Sahu
GROWTH AND ANTIOXIDATIVE ENZYMES RESPONSE OF NILE TILAPIA *Oreochromis niloticus* FINGERLINGS TO ETHANOLIC EXTRACT OF *Moringa oleifera* FLOWER
- 2:45 Adetola Jenyo-Oni**, Emmanuel Ajani, Tolulope Owolawi
THE USE OF LYOPHILIZED TESTES FROM BULL *Bos indicus* RAM *Ovis aries* AND BUCK *Capra hircus* FOR MASCULINIZATION OF NILE TILAPIA *Oreochromis niloticus* L.
- 3:00 BREAK**

- 3:30 Qing Pan**, Cuiying Chen
N-3 ESSENTIAL FATTY ACIDS IN NILE TILAPIA *Oreochromis niloticus*: DIETARY LINOLENIC ACID HAS GREAT EFFECTS ON LINOLEIC ACID BIOCONVERSION
- 3:45 Qing Pan**, YuWen Tan, ShuangLong Wu, Feng Chen
THE STUDY ON SELENIUM NUTRITION: OPTIMUM DIETARY REQUIREMENT OF SELENIUM IN JUVENILE NILE TALIPIA *Oreochromis niloticus*
- 4:00 Kevin Fitzsimmons**
AMERICAS TILAPIA ALLIANCE ANNUAL MEETING

SHRIMP BREEDING AND GENETICS

Friday, February 26 10:30 - 12:30 Champagne 1
Chair: Dean Jerry

- 10:30 Greg J. Coman**, Brad J. Argue
DOMESTICATION AND SELECTIVE BREEDING OF *Penaeus monodon*
- 11:00 Siuming Chan**, Lili Shi, Xiao-Yun Li, Cheng Qui Wang, Shi Ping Yang
TRANSCRIPTOMIC APPROACH TO IDENTIFY SEX DETERMINATION GENES IN THE MALE SHRIMP *Fenneropenaeus merguensis*
- 11:15 Mehar S. Khatkar**, Kyall R. Zenger, Jeff Prochaska, Hein van der Steen, David B. Jones, Dean R. Jerry, Herman W. Raadsma
GENOMIC PREDICTION AND GENOME-WISE ASSOCIATIONS IN THE PACIFIC WHITELEG SHRIMP *Litopenaeus vannamei*
- 11:30 Amir Sagi**, Assaf Shechter, Ohad Rosen, Brit Eilam, Dudu Azulay
ALL-FEMALE CRUSTACEAN AQUACULTURE

TAURINE: CURRENT KNOWLEDGE, FUTURE ROLES IN AQUACULTURE

Friday, February 26 10:30 - 12:30 Champagne 3
Chair: Guillaume Salze

- 10:30 Tony Budi Satriyo**, Lus M. López, Mario A. Galaviz, Guillaume Salze
EVALUATION OF DIETARY TAURINE ON BLOOD PARAMETERS, SOMATIC INDICES AND LIVER STATUS OF *Totoaba macdonaldi*
- 10:45 Ron Johnson**, Aaron Watson, Shin-Kwon Kim, Peter Nicklason, Frank Sommers, Frederic Barrows
EFFECTS OF DIETARY TAURINE AND LIPID LEVEL ON GROWTH AND NUTRIENT UTILIZATION OF JUVENILE SABLEFISH *Anoplopoma fimbria* FED ALTERNATIVE PLANT PROTEIN FEEDS
- 11:00 Mary E.M. Larkin**, Allen R. Place
DEVELOPMENT OF A DIETARY TAURINE-DEPENDENT ZEBRAFISH STRAIN
- 11:15 Rosemary Jagus**, Chieh-Lun Liu, Aaron Watson, Allen Place
ADAPTATION OF A LIVER FISH CELL LINE (ZFL) TO A TAURINE FREE MEDIUM

11:30 Michelle B. Price, Kathleen A. Turano, Frank J. Turano
DEVELOPMENT OF TAURINE-CONTAINING PLANT SEED

11:45 Matt Hawkyard, Kevin Stuart, Mark Drawbridge, Yoav Barr, Chris Langdon,
Ben Laurel
METHODS FOR THE TAURINE ENRICHMENT OF LIVE PREY AND THEIR IMPACTS
ON MARINE FISH LARVAE

AQUACULTURE AND FISH TECH SEAFOOD UPDATE

Friday, February 26 10:30 - 12:30 Vendome A

Chair: John Ewart

10:30 John Ewart, Doris Hicks
AQUACULTURE AND FISH TECH SEAFOOD UPDATE

Doris Hicks
SEAFOOD SAFETY, PROCESSING AND REGULATION

Doris Hicks
SEAFOOD / AQUACULTURE PRODUCTS IN THE DIET: BENEFITS AND RISK

John Ewart, Doris Hicks
SEAFOOD AND AQUACULTURE ISSUES: COMMUNICATING THE POSITIVE
MESSAGE

FRIDAY

SALMONIDS

Friday, February 26 10:30 - 3:00 Concorde A

Chair: Erick Sturm

10:30 Ivan Gallego-Alarcon, David García-Mondragon, Ivan Cervantes-Zepeda,
Daury Garcia-Pulido
HISTORY OF RAINBOW TROUT *Oncorhynchus mykiss* PRODUCTION IN THE
HIGHLANDS OF CENTRAL MEXICO

10:45 Laura White-Olascoaga, David Garcia-Mondragon, Ivan Gallego-Alarcon,
Daury Garcia-Pulido
RAINBOW TROUT *Oncorhynchus mykiss* PRODUCTION SYSTEMS IN THE
MEXICAN HIGHLANDS

11:00 Selene Ortiz-Velazquez, Ivan Gallego-Alarcon, Ivan Cervantes-Zepeda,
Daury Garcia-Pulido
RAINBOW TROUT *Oncorhynchus mykiss* ALBINO BREED IN A RECIRCULATING
AQUACULTURE SYSTEM

11:15 Cheyenne Owens, Wendy Sealey, Zachariah Conley, Christopher Myrick
GROWTH OF JUVENILE SNAKE RIVER CUTTHROAT TROUT *Oncorhynchus clarkii*
behnekei FED COMMERCIAL-TYPE DIETS

- 11:30 Victor Schmidt**, Christopher Good, Linda Amaral-Zettler
AN ALTERNATIVE-PROTEIN DIET DOES NOT IMPACT MICROBIAL STABILITY IN SALMON RECIRCULATING AQUACULTURE SYSTEMS
- 11:45 Fauve Strachan**, Chris Kennedy
THE ENVIRONMENTAL FATE AND NON-TARGET EFFECTS OF SEA LICE PESTICIDES USED IN SALMON AQUACULTURE
- 12:30 LUNCH**
- 1:30 Mahmoud Nafisi Bahabadi**
EFFECT OF 17 β -ESTRADIOL, OVARIAN FLUID FREE STEROIDS AND STORAGE DURATION ON GAMETE VIABILITY OF RAINBOW TROUT *Oncorhynchus mykiss*
- 1:45 Erick Sturm**, Vanessa Lo, Mark Galloway, David Streig, R. Bruce MacFarlane, Sean Hayes
OVAPLANT® USAGE IN A COHO SALMON *Oncorhynchus kisutch* CAPTIVE BROODSTOCK PROGRAM – TEN YEARS WORTH OF SPAWNING DATA
- 2:00 Jessica Piesz**, Sarah Barker, Ian Bricknell
EFFECTS OF THE SECRETORY/EXCRETORY PRODUCTS OF *Lepeophtheirus salmonis* ON ATLANTIC SALMON LEUKOCYTE MIGRATION

OYSTERS

Friday, February 26 10:30 - 3:00 Loire

Chairs: Joth Davis, Chris Davis

- 8:30 John Scarpa**, Joe Fox, William Balboa
POTENTIAL FOR OYSTER CULTURE IN TEXAS
- 8:45 Curtis Gamble**
AN EVALUATION OF THE FLOATING CAGE SYSTEM FOR EASTERN OYSTER *Crassostrea virginica* AQUACULTURE PRODUCTION IN THE NORTHERN GULF OF MEXICO
- 9:00 CANCELLED**
- 9:15 William C. Walton**
CURRENT STATUS OF OYSTER AQUACULTURE ON ALABAMA'S GULF COAST
- 9:30 Paul Rawson**, Karen Pianka
PREVENTATIVE TREATMENTS FOR THE CONTROL OF BLISTER WORM *Polydora websteri* IN THE EASTERN OYSTER *Crassostrea virginica*
- 9:45 Gulnihal Ozbay**, Brian Reckenbeil, John Ewart
UTILIZING SHORELINE RIPRAP FOR STOCKING EASTERN OYSTERS *Crassostrea virginica*
- 10:00 BREAK**
- 10:30 Don Meritt**, Donald Webster, Kennedy Paynter
IT'S A CONSTRUCTION PROJECT: LESSONS LEARNED FROM TWO DECADES OF HATCHERY-BASED OYSTER RESTORATION IN MARYLAND

- 10:45 Fariborz Ehteshami**, Nicholas Romano, Annie Christianus, Mehdi Ebrahimi
HYBRIDIZATION OF *Crassostrea belcheri* ♀ × *C. iredalei* ♂ IMPROVED THE SURVIVAL AND GROWTH UNDER HATCHERY CONDITIONS OVER PURE STRAINS
- 11:00 Melissa Southworth**, Roger Mann
SO WHICH KIDS COME FROM WHICH SPAWNING?
- 11:15 Evan Durland**, Chris Langdon, Pierre De Wit, Eli Meyer, George Waldbusser
BREEDING PACIFIC OYSTERS *Crassostrea gigas* FOR RESILIENCE TO CHANGING OCEAN CONDITIONS
- 11:30 David Kuhn**, Joe Salisbury, Durrelle Scott, Elizabeth Shadwick, Karen Hudson, AJ Erskine, James Wesson, Daniel Taylor
PROTECTING THE AQUACULTURE INDUSTRY IN THE CHESAPEAKE BAY FROM A DYNAMIC CARBONATE CHEMISTRY ENVIRONMENT
- 11:45 Manuel Segovia**, Juan Benavides, Carmen Paniagua
EFFECT OF FEEDING STRATEGY AND CARBON DIOXIDE-CARBONATE SYSTEM DYNAMICS IN THE REPRODUCTIVE CONDITIONING OF THE KUMAMOTO OYSTER *Crassostrea sikamea* MAINTAINED IN A RECIRCULATING AQUACULTURE SYSTEM
- 12:00 Brian R. Callam**, John Supan
ANALYSIS OF GONAD DEVELOPMENT BY DIPLOID, TRIPLOID, AND TETRAPLOID EASTERN OYSTER *Crassostrea virginica* BROODSTOCK IN LOUISIANA
- 12:15 Abdellah Benabdelmouna**, Christophe Ledu
DIRECT AND INDIRECT INDUCTION OF AUTOTETRAPLOID PACIFIC OYSTERS *Crassostrea gigas* (THUNBERG) USING NORMAL DIPLOID EGGS: IMPACT ON CYTOGENETIC STABILITY
- 12:30 LUNCH**
- 1:30 Anna Priester**, Donald Meritt, Kennedy Paynter, Louis Plough, Standish Allen
EFFECTS OF SALINITY CHANGE ON LARVAL SETTLEMENT SUCCESS OF THE EASTERN OYSTER *Crassostrea virginica*
- 1:45 Eric Guévelou**, Standish K. Allen, Jr.
RAPID PREDICTION OF BIOCHEMICAL COMPOSITION IN EASTERN OYSTER *Crassostrea virginica* USING NEAR INFRARED REFLECTANCE SPECTROSCOPY
- 2:00 Edward J. Catapane**, Margaret A. Carroll
HISTAMINE IN THE BIVALVE *Crassostrea virginica*
- 2:15 Kennedy Paynter**, Drew Needham, Sara Lombardi
EASTERN OYSTER *Crassostrea virginica* HEART RATES ASSOCIATED WITH DIFFERING OXYGEN CONCENTRATIONS AS MEASURED BY MINIMALLY INVASIVE ELECTROCARDIOGRAPHY
- 2:30 Sarah K.D. Pease**, Kimberly S. Reece, Wolfgang K. Vogelbein
EXPOSURE OF THE EASTERN OYSTER *Crassostrea virginica* TO THE HARMFUL ALGAL BLOOM SPECIES *Alexandrium monilatum*
- 2:45 Clyde L. MacKenzie, Jr.**
A COMPARASON OF THE EFFECTS OF HURRICANE AGNES IN 1972 IN THREE MAJOR OYSTERING LOCATIONS

SUSTAINABLE AQUACULTURE AND GLOBAL PERSPECTIVE

Friday, February 26 1:30 - 4:30 Champagne 1

Chairs: Paul Anderson, Barry Costa-Pierce

- 1:30 Roy Palmer**
GLOBAL PERSPECTIVES ON SUSTAINABLE AQUACULTURE
- 1:45 Barry Costa-Pierce**
AN EXPANDED INDUSTRIAL MODEL OF ECOLOGICAL AQUACULTURE AND SUSTAINABLE FISHERIES WILL BE REQUIRED TO MEET THE PROTEIN NEEDS OF THE FUTURE
- 2:00 Dane Klinger**, James Watson, Simon Levin
FUTURE GLOBAL FINFISH AQUACULTURE UNDER CLIMATE CHANGE
- 2:15 Kimberly Thompson**, Jerry R. Schubel
MARINE AQUACULTURE IN THE CONTEXT OF THE GLOBAL FOOD SUPPLY
- 2:30 Daniel Cheney**, Bobbi Hudson, David Preikshot, Joao Ferreira, Danna Moore, Suzanne Bricker, Terry King
DETERMINING SOCIAL AND ECOLOGICAL CARRYING CAPACITIES FOR SOUTH PUGET SOUND, WASHINGTON, USA
- 3:00 BREAK**
- 3:30 Julie Davis**, Laura W. Jodice, William C. Norman
SUPPORT FOR MARICULTURE AMONG RESIDENTS AND TOURISTS IN SOUTH CAROLINA AND FLORIDA COASTAL COMMUNITIES
- 3:45 Ivan Cervantes-Zepeda**, Ivan Gallego-Alarcon, Dauray Garcia-Pulido, Selene Ortiz-Velazquez
SUSTAINABILITY EVALUATION INDICATORS FOR MEXICAN AQUACULTURE
- 4:00 Carolina Casanova**, Humberto Villarreal, José Naranjo
SUSTAINABLE DEVELOPMENT AND GOVERNANCE OF AQUACULTURE IN BAJA CALIFORNIA SUR, MEXICO

PREBIOTICS, PROBIOTICS, AND NUTRICEUTICALS

Friday, February 26 1:30 - 4:30 Champagne 3

Chairs: Wendy Sealey, Delbert Gatlin III

- 1:30 Victor Schmidt**, Marta Gomez-Chiarri, Chelsea Roy, Linda Amaral-Zettler
THE INFLUENCE OF ANTIBIOTICS AND PROBIOTICS ON MICROBIOME-MEDIATED DISEASE RESISTANCE IN THE TELEOST *Poecilia sphenops*
- 1:45 David Kuhn**, Daniel Taylor, Stephen Smith, David Drahos
EFFECTS OF DIRECT-FED PROBIOTICS AND DISEASE-INDUCED STRESS ON THE METABOLOME OF FISH
- 2:00 Marlien Schaeck**, Freddy Haesebrouck, Wim Van Den Broeck, Annemie Decostere
PROBIOTIC SELECTION FOR EUROPEAN SEA BASS LARVICULTURE: AN INNOVATIVE APPROACH

- 2:15 Dennis McIntosh**, Eric Schott, Harold Schreier, Grant Blank
IDENTIFICATION AND ISOLATION OF NOVEL PROBIOTIC BACTERIA FOR USE IN MARINE AQUACULTURE
- 2:30 Andrea Larsen**, Nicole Rhody, Ron Hans, Kevan Main
EFFECT OF A MIXED *Bacillus* PROBIOTIC ON SURVIVAL, GROWTH, AND MICROBIOTA OF COMMON SNOOK *Centropomus undecimalis* LARVAE
- 2:45 Oscar Galagarza**, David Kuhn, Stephen Smith, Daniel Taylor, Joseph Eifert, Robert Williams
INFLUENCE OF A NOVEL PROBIOTIC CANDIDATE ON IMMUNITY AND DISEASE RESISTANCE OF *Pangasius hypophthalmus*
- 3:00 BREAK**
- 3:30 Francisca George**, Akinwale Akinleye, Adeoluwa Akinyemi, Oluwatoyin Afolabi
DEVELOPMENT AND EVALUATION OF THE EFFICACY OF A LOCAL PROBIOTIC IN COMPARISON WITH A COMMERCIAL PROBIOTIC IN THE AFRICAN CATFISH *Clarias gariepinus*
- 3:45 Fernando Yamamoto**, Fernando Jonas Sutili, Delbert M. Gatlin III
THE EFFECT OF DIETARY BETA GLUCAN SUPPLEMENTATION ON THE INNATE IMMUNE RESPONSES OF NILE TILAPIA

FISH HEALTH

Friday, February 26 1:30 - 5:00 Champagne 2

Chair: Kathleen Hartman

- 1:30 Robert Durborow**, John Kelso, Jiashuo Ma, Catherine Frederick, Tiffany Ogunsanya, Andrew Redden, Khamisi Campbell, Walter Kahill, Christopher Lyvers
TWENTY-SIX YEAR HISTORY OF FISH DISEASE CASES DIAGNOSED AT THE KENTUCKY STATE UNIVERSITY FISH DISEASE DIAGNOSTIC LABORATORY FROM 1990 THROUGH 2015
- 1:45 Suja Aarattuthodiyil**
FISH CERTIFICATION PROGRAM: A MODEL FROM ARKANSAS
- 2:00 Timothy Bruce**, Michael L. Brown, Regg D. Neiger, Seema Das
IMMUNOMODULATION IN RAINBOW TROUT *Oncorhynchus mykiss* FED BIOPROCESSED SOY DIETS AND CHALLENGED WITH *Flavobacterium psychrophilum*
- 2:15 Sophia Xu**, Juliette Ben Arous, Laurent Dupuis
ADJUVANTS IMPROVE THE PROTECTION CONFERRED BY IMMERSION VACCINES AGAINST YERSINIOSIS IN RAINBOW TROUT
- 2:30 Nicholas Fagnoli**, Timothy Bowden
CIRCADIAN AND SEASONAL RHYTHM OF TOTAL ANTIOXIDANT CAPACITY AND REACTIVE OXYGEN AND NITROGEN SPECIES IN ATLANTIC SALMON *Salmo salar*
- 2:45 Evelien De Swaef**, Wim Van den Broeck, Freddy Haesebrouck, Annemie Decostere
DEVELOPMENT OF THE FIRST STANDARDIZED BIOTIC CHALLENGE MODEL FOR DOVER SOLE *Solea solea*

3:00 BREAK

- 3:30 Carol Stepien**, Lindsey Pierce, Douglas Leaman, Megan Niner, Brian Shepherd
GENE DIVERSIFICATION OF AN EMERGING PATHOGEN: A DECADE OF MUTATION IN A NOVEL FISH VIRAL HEMORRHAGIC SEPTICEMIA (VHS) SUBSTRAIN SINCE ITS FIRST APPEARANCE IN THE LAURENTIAN GREAT LAKES
- 3:45 Jason Evenhuis**, Benjamin LaFrentz
VIRULENCE OF *Flavobacterium columnare* GENOMOVARS IN RAINBOW TROUT *Oncorhynchus mykiss*
- 4:00 Fausto A. Marinho-Neto**, Gustavo S. Claudiano, Cleslei F. Zanelli, Jefferson Y. Aguinaga, Flávio R. Moraes, Julieta R.E. Moraes
EXPERIMENTAL INFECTION OF PACU *Piaractus mesopotamicus* WITH *Aeromonas hydrophila*
- 4:15 Kay Lwin Tun**, Kevin Fitzsimmons, May Myat Noe Lwin, Soe Tun, Yan Naung Tun, Hiroshi Yokoyama, Tomoyoshi Yoshinaga
MYXOZOAN INFECTIONS IN CULTURED MAJOR CARPS IN MYANMAR
- 4:30 Oystein Evensen**, Elin Petterson, Tz-Chun Guo, Aase Mikalsen
RECOMBINATION EVENTS IN POSITIVE STRAND, NON-SEGMENTED SALMON PANCREAS DISEASE VIRUS
- 4:45 Tingbao Yang**, Limin Lu
EXPERIMENTAL STUDY ON THE ECOLOGY OF *Cichlidogyrus sclerosus* (MONOGENEA) ON TILAPIA

WORKSHOP ON PLANNING STRATEGICALLY FOR MARKETING AND FINANCIAL SUCCESS OF AQUACULTURE BUSINESSES

Friday, February 26 1:30 - 5:00 Concorde B

Chair: Carole Engle

- 1:30 Carole R. Engle**, Ganesh Kumar
WORKSHOP ON PLANNING STRATEGICALLY FOR MARKETING AND FINANCIAL SUCCESS OF AQUACULTURE BUSINESSES

This workshop will focus on analysis of several different aquaculture business scenarios. Participants will practice their business analytical skills by working through various alternative solutions for hypothetical aquaculture businesses, based on sets of “records” presented. The emphasis will be on hands-on engagement of participants to increase their ability to analyze business performance each year and make strategic marketing decisions for improvement.

Workshop participants will have up to three hours to scrutinize marketing and financial datasets from which to develop specific short-term marketing, production, and financial goals. Thinking strategically about how to manage production in order to meet the price, volume, and demand characteristics of the business’s key markets is key to business success. Annual scrutiny of financial, biological, marketing, and personnel performance is essential for success in today’s business climate.

AQUACULTURE FOOD SAFETY

Friday, February 26 1:30 - 4:00 Vendome A

Chairs: Brett Koonse, Mike Jahncke

- 1:30 Chengchu (Catherine) Liu**
POST-HARVEST PRACTICES FOR VIBRIO CONTROL IN MOLLUSCAN SHELLFISH
- 1:45 Brett Koonse**
AQUACULTURE FOOD SAFETY AND DISEASE MANAGEMENT...A NEW PARADIGM
- 2:00 Michael L. Jahncke**
ENSURING FOOD SAFETY AND FOOD QUALITY OF HARVESTED AQUACULTURE PRODUCTS
- 2:15 Kevin F. Yaptenco**, Sharmaine N. Pardia, Jonnel Andrew C. Duque, Ronel S. Pangan
MOISTURE SORPTION ISOTHERMS OF DRIED SEA CUCUMBER *Holothuria scabra* FOR PREDICTION OF SHELF LIFE
- 2:30 Chengchu Liu**, David Green
BEST MANAGEMENT PRACTICES FOR FISH HANDLING FROM FARM TO TABLE
- 2:45 Bjørn Tore Lunestad**, Ole Jakob Nøstbakken, Helge Torbjørn Hove, Ingvild Eide Graff, Amund Måge, Lise Madsen, Rita Hannisdal
MONITORING OF PHARMACEUTICAL SUBSTANCES IN NORWEGIAN FARMED FISH
- 3:00 Juan Silva**
AQUACULTURE FOOD SAFETY PROGRAMS IN THAILAND AND OTHER COUNTRIES CURRENTLY WORKING WITH

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