

September, 11th (Wed)

## Presentation (Main Hall)

### 9:00 ~ 9:40 Plenary Lecture 2

**【Chair】** Haruko Takeyama (Waseda University)

**【Speaker】**

**PL2** Shuhei Tanaka (Kyoto University, Japan)  
**“Nobody Knows the Environmental Fate of Plastic Garbage”**

### Poster Short Presentation

**【Chairs】** Tetsushi Mori (Department of Biotechnology and Life Sciences, Tokyo University of Agriculture and Technology)

Takeshi Terahara (Department of Marine Biosciences, Tokyo University of Marine Science and Technology)

### 13:30 ~ 16:00 Reproductive and Developmental Technology in Aquaculture

**【Chairs】** Shaojun Du (Institute of Marine and Environmental Technology, University of Maryland)  
Ten-Tsao Wang (Institute of Marine and Environmental Technology, University of Maryland)

**【Speakers】**

**05-1** Amir Sagi (Department of Life Sciences and the National Institute for Biotechnology in the Negev, Ben-Gurion University, Israel)

**“IAG-SWITCH-BASED MONOSEX CULTURE BIOTECHNOLOGIES IN DECAPOD CRUSTACEANS”**

**05-2** Tom Levy (Department of Life Sciences, Ben-Gurion University of the Negev, Israel)

**“WW NEO-MALES, SEX CHROMOSOMES AND ALL-FEMALE AQUACULTURE IN CRUSTACEANS”**

**05-3** Lan Xu (Department of Marine Biotechnology & Institute of Marine and Environmental Technology, University of Maryland Baltimore County)

**“Developing Technologies to Induce Reproductive Sterility in Eastern Oysters without Chromosome Set Manipulation”**

**05-4** Zhang Bo (Tianjin Bohai Sea Fisheries Research Institute, Tianjin, China)

**“seminal plasma exosomes:promising biomarker for identification of male and pseudo-males in Cynoglossus semilaevis”**

- 05-5** Makoto Hayashi (Life Science Center for Survival Dynamics, Tsukuba Advanced Research Alliance (TARA), University of Tsukuba/Department of Marine Biosciences, Tokyo University of Marine Science and Technology)  
**“Identification of the molecular markers preferentially expressed in spermatogonial stem cells in fish”**
- 05-6** Sakura Tanaka (Institute of Marine and Environmental Technology, University of Maryland Baltimore County )  
**“Reproduction without gonadotropin releasing hormone - a unique opportunity to reveal alternative control pathways in zebrafish”**
- 05-7** Shaojun Du (Institute of Marine and Environmental Technology, University of Maryland)  
**“Genetic regulation of fish myoblast fusion and muscle growth”**
- 05-8** Hirofumi Ohga (Fisheries Research Institute of Karatsu, Kyushu University, Saga, Japan)  
**“Breeding research to suppress cannibalistic behavior of the juvenile stage : AVTR-V1a2 knockout in chub mackerel”**

## Presentation (Sub Hall)

13:35 ~ 16:00 **New Analysis for Microbiol Community: Metagenomics to Single Cell Analysis**

Sponsored by CBBB-OIL, AIST-Waseda University

**[Chairs]** Haruko Takeyama (Waseda University)  
Jörn Piel (Institute of Microbiology, Department of Biology, ETH Zurich)

### **[Speakers]**

- 06-1** Jörn Piel (Institute of Microbiology, ETH Zurich, Switzerland)  
**“Identifying new chemical resources from uncultivated life with metagenomic and single-cell techniques”**
- 06-2** Katsuhiko Mineta (Computational Bioscience Research Center (CBRC), King Abdullah University of Science and Technology (KAUST))  
**“The challenge of bioprospecting by the metagenomics approach in the Red Sea”**
- 06-3** Yohei Nishikawa (CBBB-OIL, AIST-Waseda University/Department of Life Science and Medical Bioscience, Waseda University)  
**“Development of microfluidic droplet-based whole genome amplification method for single-cell genome analysis of coral commensal bacteria; *Endozoicomonas*”**
- 06-4** Masahiro Ando (PRESTO, Japan Science and Technology Agency/Research organization for Nano and Life Innovation, Waseda University)  
**“Label-free quantitative molecular imaging of microbiological samples by Raman hyperspectral analysis”**
- 06-5** Chan Dieu Hoai Nguyen (University of the Sunshine Coast)  
**“Atlantic salmon (*Salmo salar* L., 1758) gut microbiota profile correlates with flesh pigmentation: cause or effect?”**

- 06-6** Juanwen Yu (Lab. of Microbiology, Fac. of Fish. Sci., Hokkaido University, Hakodate, Japan)  
**“Baseline analyses of gut microbiome changes in gut regenerated Japanese sea cucumber *Apostichopus japonicus*, and culturing the gut microbiome”**

## Presentation (Conference Room)

### 13:30 ~ 16:00 Marine Biotechnology for Environmental Conservation

Sponsored by The Mitsubishi UFJ Environment Foundation Lectures  
(University of Tsukuba) & Usui Sangyo Co. Ltd.

- [Chairs]** Jason Hall-Spencer (School of Biological and Marine Sciences, University of Plymouth)  
Iwane Suzuki (University of Tsukuba)

#### **[Speakers]**

- 07-1** Jason Hall-Spencer (School of Biological and Marine Sciences, University of Plymouth, UK)  
**“Effects of ocean acidification and warning in Asia”**
- 07-2** Ben Paul Harvey (Shimoda Marine Research Center, University of Tsukuba, Japan)  
**“The dominance of turf-forming diatoms under ocean acidification and their role in community succession”**
- 07-3** Bernard Degnan (University of Queensland)  
**“Biocontrol of crown-of-thorns starfish using a genome- and proteome-informed approach”**
- 07-4** Hirotooshi Endo (Faculty of Life and Environmental Sciences, University of Tsukuba)  
**“Molecular biological studies on alkenones for establishing the reliable biomolecular thermometer in marine environmental research”**
- 07-5** Ryuji Kojima (National Institute of Maritime, Port and Aviation Technologies)  
**“A laboratory bioassay for the efficacy of antifouling paints using *Ectocarpus siliculosus*”**
- 07-6** Su Mei Wu (Department of Aquatic Biosciences, Chiayi University, Taiwan/Taiwan Marine Biotechnology Society )  
**“Problems of Vitellogenin Expression on Male Juvenile Tilapia as the Sole Biomarker to Detect Endocrine Disrupting Chemicals”**
- 07-7** Anna Octavera (Tokyo University of Marine Science and Technology)  
**“Production of Slender Bitterling (*Tanakia lanceolata*) Offspring From Germ Cell-Less Chinese Rosy Bitterling (*Rhodeus ocellatus ocellatus*) Surrogate Parents”**
- 07-8** Sang Wha Kim (Laboratory of Aquatic Biomedicine, College of Veterinary Medicine and Research Institute for Veterinary Science, Seoul National University, Seoul, Republic of Korea)  
**“First report of Ovaprim application in shark: Induction of oocyte development, ovulation, and semen release by Ovaprim injection in Banded houndshark (*Triakis scyllium*).”**

## 18:30 ~ 19:10 Night Plenary Lecture 1

Sponsored by CBBB-OIL, AIST-Waseda University

**[Chair]** Haruko Takeyama (Waseda University)

**[Speaker]**

*NPL1* Masaki Miya (Natural History Museum & Institute, Chiba)

**“Environmental DNA metabarcoding: a new biodiversity monitoring method that enables a data-driven approach for fish community research”**

## Presentation (Training Room)

## 13:35 ~ 16:00 Marine Functional Foods

Sponsored by Maruha Nichiro Corporation and  
Shonan Institute of Medical and Preventive Science

**[Chairs]** Kei Hamazaki (Department of Public Health, Faculty of Medicine, University of Toyama)  
Joseph R. Hibbeln (Section on Nutritional Neurosciences LMBB, National Institute on Alcohol Abuse and Alcoholism, National Institute of Health)

**[Speakers]**

*08-1* Kei Hamazaki (Department of Public Health, Faculty of Medicine, University of Toyama, Japan)

**“Importance of dietary omega-3 polyunsaturated fatty acid”**

*08-2* Joseph R. Hibbeln (Section on Nutritional Neurosciences LMBB, National Institute on Alcohol Abuse and Alcoholism, National Institute of Health)

**“Seafood in neurodevelopment and neurological health”**

*08-3* Yoshiharu Matahira (Sunsho Pharmaceutical Co. Ltd., Japan.)

**“Secondary Analysis of a Randomized, Double-Blind, Placebo-Controlled Trial to Evaluate the Impact of Ascidian (*Halocynthia roretzi*)-Derived Plasmalogen on Cognitive Function in Healthy Humans”**

*08-4* Ken Chuian-Fu (Department of Biology, National Changhua University of Education, Taiwan, ROC)

**“Increasing Omega-3 Polyunsaturated Fatty Acids in Tilapia Can Upregulate *nlrc3* and Reduce *Streptococcus agalactiae* Induced Inflammation by Transcriptomic and Metagenomic Analysis”**

*08-5* Chiho Shoda (Laboratory of Photobiology, Keio University School of Medicine/Department of Ophthalmology, Keio University School of Medicine/Department of Ophthalmology, Nihon University School of Medicine)

**“Fish ingredients inhibiting hypoxia-inducible factor suppress choroidal neovascularization and subretinal fibrosis in mice”**

**18:30 ~ 19:10 Night Plenary Lecture 2**

**[Chair]** Shigeharu Kinoshita (Laboratory Aquatic Molecular Biology and Biotechnology, Graduate School of Agricultural and Life Sciences, The University of Tokyo)

**[Speaker]**

**NPL2** Daniel Chourrout (Sars International Centre for Marine Molecular Biology, University of Bergen, Norway)  
**“AREA OF GENOMIC TURBULENCE NEAR VERTEBRATES”**

**Poster Discussion (Gallery ABCD)**

**16:30 ~ 18:00 Reproductive and Developmental Technology in Aquaculture**

**[Speakers]**

- P5-1** Kazutoshi Okamoto (Shizuoka Prefectural Research Institute of Fishery)  
**“Improvement in Japanese giant spider crab *Macrocheira kaempferi* survival in captivity during critical early life stages -Effects of antibiotics and deep seawater on megalopa and first crab survival-”**
- P5-3** Yuichi Ozaki (National Research Institute of Aquaculture, Japan Fisheries Research and Education Agency)  
**“Expressional regulation of steroidogenic enzyme genes in the testis of Japanese eel matured by recombinant eel gonadotropin injections”**
- P5-4** Hiroshi Suzuki (National Research Institute of Aquaculture, Japan Fisheries Research and Education Agency)  
**“Differential effects of recombinant Japanese eel Lh with a variety number of C-terminal peptide of hCG on male sexual maturation in Japanese eel”**
- P5-5** Yukinori Kazeto (Kamiura Station, National Research Institute of Aquaculture, Japan Fisheries Research and Education Agency)  
**“Structure analysis of N-glycans responsible for the in vivo bioactivity of recombinant Japanese eel follicle-stimulating hormone”**
- P5-6** Satoshi Kai (Laboratory of Marine Biology, Faculty of Agriculture, Kyushu University, Fukuoka, Japan)  
**“Luteinizing hormone  $\beta$ -subunit gene knockout in Japanese anchovy (*Engraulis japonicas*) by TALEN-based genome editing”**
- P5-7** Tulio Teruo Yoshinaga (Surgery Department, School of Veterinary Medicine and Animal Sciences University of São Paulo, Brazil)  
**“Testicular allografting followed by immunosuppressive treatment promotes germ cell maintenance in rainbow trout (*Oncorhynchus mykiss*)”**
- P5-8** Kuan-Chieh Peng (Department of Marine Biotechnology & Institute of Marine and Environmental Technology, University of Maryland Baltimore County)  
**“Sterilizing fish by gene knockdown techniques”**
- P5-9** J. Sook sook Chung (Institute of Marine and Environmental Technology, University of Maryland Center for Environmental Science, Baltimore, MD, USA)  
**“Crustacean female sex hormone in the blue crab, *Callinectes sapidus*”**

- P5-10** Wai-Kwan Chu (Department of Aquaculture, National Taiwan Ocean University, Keelung, Taiwan)  
**“Targeted Mutagenesis of *dead end (dnd1)* Gene for Infertility Control of Zebrafish and Angelfish by CRISPR-Cas9 Genome Editing”**
- P5-12** Masafumi Hamazuka (Department of Biological Sciences, Kanagawa University, Japan)  
**“Characterization of Sinus Gland Peptides from the Southern Rough Shrimp *Trachysalambria curvirostris*”**
- P5-13** Eliahu D. Aflalo (Department of Life Sciences, Ben-Gurion University of the Negev, Beer-Sheva 8410501, Israel/Department of Life Sciences, Achva Academic College, Israel)  
**“TWO-GENERATION SELECTIVE BREEDING REVEALING A *Macrobrachium rosenbergii* LINE WITH HIGHER FEMALE PERFORMANCE SUITABLE FOR ALL- FEMALE MONOSEX CULTURE”**

**16:30 ~ 18:00 New Analysis for Microbiol Community: Metagenomics to Single Cell Analysis**

**[Speakers]**

- P6-1** Joan Tang Xiao Joe (Doctoral Degree Program in Marine Biotechnology, National Taiwan Ocean University, Taiwan)  
**“Investigation of intestinal microbial flora in larval and diseased grouper”**
- P6-2** Mengqi Sun (University of Maryland Center for Environmental Science)  
**“Abundance and dynamics of estuarine virioplankton revealed by deep sequencing”**
- P6-3** Masato Kogawa (Department of Life Science and Medical Bioscience, Waseda University/CBBD-OIL, AIST-Waseda University)  
**“Single-cell genomics of uncultured sponge-associated bacteria producing aurantioside”**
- P6-4** Ryo Mukojima (Department of Life Science and Medical Bioscience, Waseda University)  
**“Detection of Mangromycin analogs by using Raman spectroscopy and MCR-ALS analysis”**
- P6-5** Ryo Negishi (Division of Biotechnology and Life Science, Institute of Engineering, Tokyo University of Agriculture and Technology)  
**“Gel-based cell manipulation technique for genotyping of single microbial eukaryotes in seawater”**
- P6-6** Saki Yanagisawa (Kitasato University School of Marine Biosciences, Japan.)  
**“Shotgun metagenomic sequencing analysis of environmental DNA extracted from seawater samples of the Ofunato Bay”**
- P6-7** Ashok Zachariah Samuel (Research organization for Nano and Life Innovation, Waseda University)  
**“Molecular Profiling of HuH7 Liver Cells with Raman Micro-Spectroscopy and Multivariate Curve Resolution”**
- P6-8** Nanami Mizusawa (Kitasato University School of Marine Biosciences, Japan.)  
**“Recurrent seasonal variation in the microbial communities of the Tama River revealed by shotgun metagenomic sequencing”**

- P6-9** Kana Jitsuno (Department of Life Science and Medical Bioscience, Waseda University, Japan)  
**“Bacterial diversity and community composition associated to *Pyropia yezoensis* cultured at three environmentally distinct sites in Japan”**
- P6-10** Louis Burgeat (Department of Life Science and Medical Bioscience, Waseda University, Japan/European  
Universitary Institute for Marine sciences (IUEM), France)  
**“Analysis of the microbiome of the Seaweed *Pyropia yezoensis* (Nori) for  
dried and baked samples harvested in different locations”**
- P6-11** Muhammad Wahyudin Lewaru (Department of Life Science and Medical Bioscience, Waseda  
University, Japan)  
**“Bacterial diazotrophic communities within the corals *Acropora tenuis* in  
Okinawa shallow reef, Japan”**

### 16:30 ~ 18:00 Marine Biotechnology for Environmental Conservation

#### [Speakers]

- P7-1** Meijie Yang (Institute of oceanology, Chinese academy of sciences/University of Chinese Academy of  
Sciences)  
**“The responses of digestive tract microflora and digestive enzymes in  
*Rapana venosa* (Valenciennes, 1846) to different temperatures”**
- P7-3** Tulio Teruo Yoshinaga (Department of Morphology, Institute of Bioscience of Botucatu, Sao Paulo  
State University, Botucatu, Brazil)  
**“Exposure of rainbow trout (*Oncorhynchus mykiss*) juveniles to chronic  
thermal stress affects the fate of spermatogonial cells and increases the  
performance of respective offspring at high temperature”**
- P7-4** Derek W. Kraft (Hawai'i Institute of Marine Biology, University of Hawai'i, Kaneohe, Hawai'i)  
**“Global Genetic Inventory of the Silky Shark (*Carcharhinus falciformis*), the  
Shark Finning Industry, and DNA Fingerprinting”**
- P7-5** Yukiyo Yamasaki (Innovative Material and Resources Research Center, Public Works Research  
Institute)  
**“Effect of mixing method on microalgal cultivation using various sewage  
resources”**
- P7-6** Jan Vicente (Hawai'i Institute of Marine Biology, University of Hawai'i at Mānoa, Kāne'ohe , HI, USA.)  
**“Surprising interactions revealed between non-native sponges and corals  
of Kāne'ohe Bay during an intensive undergraduate summer research  
program”**

### 16:30 ~ 18:00 Marine Functional Foods

#### [Speakers]

- P8-3** Nami Tomonaga (Division of Applied Biosciences, Graduate School of Agriculture, Kyoto University)  
**“Improving effect of dietary ceramide 2-aminoethylphosphonate, a marine  
sphingopholipid, on skin barrier function in hairless mice”**

- P8-4** Mi Hwa Park (Silla University)  
**“Octaphloretol A isolated from *Ishige sinicola* stimulates osteoblast differentiation through activation of the bone morphogenetic protein and Wnt.  $\beta$ -catenin signaling pathways in MC3T3-E1 cells”**
- P8-5** Bokyung kim (silla university)  
**“Effect of *Gloiopeltis Furcata* Extract on Bone Formation in ovariectomized”**
- P8-6** Bokyung kim (silla university)  
**“The Effects of *Gloiopeltis Furcata* Extract on Osteoblast Differentiation of MC3T3-E1 Cells”**
- P8-7** Kyung Im Jung (silla university/Full-Jungsung Co)  
**“Anti-inflammatory Activity of Sea Tangle (*Saccharina japonica*) Fermented with *Lactobacillus brevis*”**
- P8-8** Jihye Ryu (silla university)  
**“Improving Preservation of Spawn of a Pollack by Using *Chamaecypris obtusa* Extracts”**
- P8-10** Kao Yi Feng (Seafood Technology Division, Fisheries Research Institute, Taiwan/Department of Animal Science and Technology, National Taiwan University, Taiwan)  
**“The apoptotic mimicry prepared from the shrimp head phospholipids reveal the immunomodulatory effects on the cell based assay and in a murine model of allergic skin inflammation”**
- P8-12** Yunok Oh (Institute of Marine Life Sciences, Pukyong National University)  
**“Blue mussel-derived osteogenic peptides enhance osteogenic differentiation of mesenchymal stem cells and in vivo bone formation by stimulating the Wnt/ $\beta$ -catenin pathways”**
- P8-13** Yunok Oh (Institute of Marine Life Sciences, Pukyong National University)  
**“Bioactive peptides from blue mussel protects vascular endothelial cellular damage induced by oxidative stress through regulation of caspase-3-apoptotic pathway”**

## 16:30 ~ 18:00 Energy and Material Recycle by Marine Biotechnology

### [Speakers]

- P13-2** Takahisa Tajima (Hiroshima University)  
**“Itaconic acid production by a marine psychrophilic bacterium”**
- P13-3** Yoshiaki Maeda (Division of Biotechnology and Life Science, Institute of Engineering, Tokyo University of Agriculture and Technology)  
**“Genomic landscape of the allopolyploid genome of the oleaginous diatom *Fistulifera solaris* as revealed by long read nanopore sequencing”**
- P13-4** Yoshiko Okamura (Graduate School of Integrated Sciences for Life, Hiroshima University/Graduate School of Advanced Sciences of Matter)  
**“A lipid-producing bacterium *Nitratireductor* sp. strain OM-1 with potential use in wastewater treatment”**



- P13-5** Noraiza Binti Suhaimi (Division of Biotechnology and Life Science, Institute of Engineering, Tokyo University of Agriculture and Technology)  
**“Functional analysis of  $\Delta 5$  elongase gene in the marine diatom *Fistulifera solaris* towards docosahexanoic acid production”**
- P13-6** Hirofumi Shimada (Division of Biotechnology and Life Science, Institute of Engineering, Tokyo University of Agriculture and Technology)  
**“Production of valuable fatty acids in the marine diatom *Fistulifera solaris* by metabolic engineering”**
- P13-7** Chiharu Tsuneoka (Division of Biotechnology and Life Science, Institute of Engineering, Tokyo University of Agriculture and Technology)  
**“IDENTIFICATION OF ENDOGENOUS INTRONS IN *FISTULIFERA SOLARIS* JPCC DA0580 FOR ROBUST TRANSGENE EXPRESSION”**
- P13-8** Masayoshi Noda (Division of Biotechnology and Life Science, Institute of Engineering, Tokyo University of Agriculture and Technology)  
**“ESTABLISHMENT OF METHOD FOR IDENTIFICATION OF NOVEL LIPID DROPLET-ASSOCIATED PROTEINS IN *FISTULIFERA SOLARIS* JPCC DA0580”**
- P13-9** Sena Yamashita (Graduate School of Integrated Sciences for Life, Hiroshima University)  
**“Analysis of lipid synthesis pathway in short-chain ester producing bacterium *Nitratireductor* sp. OM-1”**
- P13-10** Yusuke Noboru (Graduate School of Advanced Sciences of Matter, Hiroshima University)  
**“Development of two-stage fermentation technology for biodiesel fuel production using alginate”**

**16:30 ~ 18:00 Marine Symbiosis & Marine Ecology**

**[Speakers]**

- P15-1** NIKHIL DILIP YADAV (LECTURER)  
**“An extensive quantitative survey of occurrence of seaweeds with reference to human activities and anthropogenic effect from the coast of Ratnagiri district of Maharashtra state, India.”**
- P15-3** Naoto Hanzawa (Faculty of Science, Yamagata University)  
**“Taxonomic status and distribution of rhizostomid jellyfish (Scyphozoa, Cnidaria) inferred from genome marker analyses”**
- P15-4** Hikaru Oyama (Department of Marine Science and Resources, Nihon University)  
**“Molecular species identification resolves taxonomic confusion in gnomefish (Teleostei, Scombroidei) in South Africa”**
- P15-7** Maho Kashitani (Department of Marine Science and Resources, Nihon University)  
**“Distribution of tetrodotoxin in acotylean flatworms (Platyhelminthes)”**
- P15-8** Shiro Itoi (Department of Marine Science and Resources, Nihon University)  
**“Microbial communities in waters of the spawning areas for Japanese eel *Anguilla japonica*”**

- P15-9** Akira Iguchi (National Institute of Advanced Industrial Science and Technology (AIST))  
**“Examination of inter- and intraspecific genetic differentiation of reef-building coral *Acropora* based on SNPs and haplotype frequency based approaches”**
- P15-10** Hao Song (CAS Key Laboratory of Marine Ecology and Environmental Sciences, Institute of Oceanology, Chinese Academy of Sciences/Laboratory for Marine Ecology and Environmental Science, Qingdao National Laboratory for Marine Science and Technology/Marine Genomics Lab, School of Biological Sciences, The University of Queensland/Center for Ocean Mega-Science, Chinese Academy of Sciences)  
**“Learning how to live together: Arginine biosynthesis complementation in sponge symbiosis”**
- P15-12** Kentaro Kawai (Graduate School of Biosphere Science, Hiroshima University, Japan)  
**“Spawning biology of the black sea bream *Acanthopagrus schlegelii* in Hiroshima Bay, revealed from spatiotemporal distribution of pelagic eggs”**
- P15-13** Hiroki Fujita (Graduate School of Biosphere Science, Hiroshima University)  
**“*Mothocya parvostis* (Isopoda: Cymothoidae), infesting juvenile black sea bream, *Acanthopagrus schlegelii*”**
- P15-14** Tomoko Koito (Department of Marine Science and Resources, Nihon University)  
**“A possible hydrogen sulfide detoxification mechanism in deep-sea hydrothermal vent-endemic polychaeta”**
- P15-15** Jan Vicente (Hawai'i Institute of Marine Biology, University of Hawai'i at Mānoa, Kāne'ohe, HI, USA.)  
**“LOSING THE UNKNOWN DIVERSITY OF CRYPTIC SPONGES IN KĀNE'ŌHE BAY TO A CHANGING CLIMATE”**