Theme	Poster ID	Poster title	Presenting author	Affiliation
Climate Changes, Ocean Acidification and Diseases	001-P	Increasing water temperature and disease risks in aquatic systems: does climate change increase the risk of diseases?	Päivi Rintamäki	Department of Ecology and Genetics, University of Oulu
	002-P	The bacterial microbiota of octocorals living in the Sea of Marmara	Süheyla Karataş	Faculty of Aquatic Sciences, Istanbul University
	003-P	Keystone molecules expression from *Mytilus galloprovincialis* under an acidified ocean	Sonia Dios	Marine Research Institute, Spanish National Research Council
Nutrition and Health	004-P	Effects of fermented and unfermented duckweed as feed additive on growth and health status of common carp (*Cyprinus carpio*)	Andreas Seitz	Zurich University of Applied Sciences
	005-P	Dietary methionine on the European sea bass immune status – a proteomic approach	Benjamín Costas	Centro Interdisciplinar de Investigação Marinha e Ambiental
	006-P	Feed associated rainbow trout gastroenteritis (RTGE) in a recirculation aquaculture system (RAS) fish farm	Satu Viljamaa-Dirks	Finnish Food Authority
	007-P	Gut health status in farmed Atlantic salmon (*Salmo salar* L.) in different seawater production localities in Norway - Gutmatters project	Paul J. Midtlyng	Aquamedic AS
	008-P	Dietary histidine, threonine or taurine supplementation induced few effects on the gilthead sea bream (*Sparus aurata*) immune status	Lourenço Ramos Pinto	Centro Interdisciplinar de Investigação Marinha e Ambiental
	009-P	Quantitative PCR assay for rapid screening of shifts in intestinal microbiota in Atlantic salmon following nutritional challenges	Úna McCarthy	Marine Scotland Science
	010-P	INFLAMMAA: Unraveling the neuro-endocrine/ immune modulatory roles of tryptophan during inflammation	Benjamín Costas	Centro Interdisciplinar de Investigação Marinha e Ambiental
Bacterial Diseases	012-P	Mycobacteriosis in cultured koi carp *Cyprinus carpio*	Yuichiro Machida	Tokyo University of Marine Science and Technology
	013-P	Bacteriophage therapy in aquaculture	Ingrid Sofie Larsen	ACDPharma
	014-P	Significant mortality in farmed Atlantic salmon (*Salmo salar* L.) associated with *Pasteurella skyensis* in Scotland	Eann Munro	Marine Scotland Science
	015-P	Pathogenicity of *Pasteurella* sp. in lumpsuckers (*Cyclopterus lumpus* L.)	Rebecca Marie Ellul	University of Bergen

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Bacterial Diseases	016-P	Microbial activation of biofilters in recirculating aquaculture systems (RAS) for post-smolt Atlantic salmon based on lab experiments and field observations	Irene Roalkvam	Department of Biological Sciences, University of Bergen
	017-P	Characterization of *Yersinia ruckeri* strains isolated from trout farms in northern Poland	Joanna Pajdak-Czaus	University of Warmia and Mazury in Olsztyn
	019-P	Monitoring of bacterial diseases in cultured salmonid and pathogenicity analysis of *Aeromonas salmonicida* causing furunculosis	Jongwon Lim	Department of Marine Biotechnology, Gangneung-Wonju National University
	020-P	Effect of phage resistance on *Flavobacterium psychrophilum* virulence	Krister Sundell	Environmental and Marine Biology, Åbo Akademi University
	021-P	Hematological and molecular response of *Salmo salar* challenged with two *Piscirickettsia salmonis* strains under different salinities	Alejandro Yáñez	Interdisciplinary Center for Aquaculture Research, Concepción
	022-P	Geographical distribution of pathogenic *Tenacibaculum* spp. strains along the Norwegian coast	Erwan Lagadec	Fish Disease Research Group, University of Bergen
	023-P	Gut microbiota and biochemical markers in rainbow trout, *Oncorhynchus mykiss* (Walbaum), during bacterial hemorrhagic septicemia (BHS)	Aleksey Parshukov	Institute of Biology of the Karelian Research Centre of the Russian Academy of Sciences
	024-P	*Tenacibaculum* infections in farmed Atlantic salmon	Øyvind Jakobsen Brevik	Cermaq Group AS, Bergen
	025-P	Serological and genetic diversity of *Flavobacterium psychrophilum* recovered from commercially raised fish in Chile: current status and perspectives	Ruben Avendaño-Herrera	Universidad Andrés Bello, Facultad de Ciencias de la Vida
	026-P	New salmonid hosts for *Tenacibaculum* species: expansion of tenacibaculosis in Chilean aquaculture	Diana Tapia-Cammas	Universidad Andrés Bello, Facultad de Ciencias de la Vida
	027-P	Prevalence of *Renibacterium salmoninarum* and *Mycobacterium marinum* in wild brown trout (*Salmo trutta fario*) populations in Austrian rivers	Seyed Mohammad Reza Delghandi	Clinical Division of Fish Medicine, University of Veterinary Medicine, Vienna
	028-P	*Piscirickettsia salmonis* outbreak in *Dicentrarchus labrax* in the Atlantic ocean	Nuno Ribeiro	Aqualife Services
	029-P	Siderophore receptors as possible antigens in the formulation of new vaccines against *Aeromonas salmonicida*	Diego Rey	Universidade de Santiago de Compostela

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Bacterial Diseases	030-P	Source of bacterial kidney disease (BKD) in Icelandic aquaculture	Snorri Már Stefánsson	Keldur Institute for Experimental Pathology, University of Iceland, Reykjavik
	032-P	*Vibrio* spp. isolated from pacific white shrimp (*Litopenaeus vannmei*) kept in recirculating aquaculture systems (RAS) – identification and pathogenicity	Verena Jung-Schroers	University of Veterinary Medicine Hannover
	033-P	Silver nanoparticles treatment of bacterial diseases of common carp	Boglárka Sellyei	Institute for Veterinary Medical Research, Centre for Agricultural Research Hungarian Academy of Sciences
	035-P	Genotyping of Turkish *Tenacibaculum maritimum* isolates	Terje Steinum	Faculty of Aquatic Sciences, Department of Fish Health, Istanbul University
	036-P	Evaluation of metabolic changes and virulence of *Piscirickettsia salmonis* strains related to biofilm formation	Denise Haussmann	Universidad Santo Tomas, Valdivia
	037-P	Host-pathogen interaction in the *P. salmonis* - Atlantic salmon model: effect of salinity as a parameter of climate change	Jaime Figueroa	Universidad Austral de Chile
	038-P	Comparative genomic analysis of *Aeromonas veronii* bv *sobria* isolated from European sea bass. Virulence, antibiotic resistance and antigenic proteins	Adriana Triga	Institute of Marine Biology, Biotechnology and Aquaculture
	039-P	Monitoring of bacterial infections in sturgeons reared in Italy	Paolo Pastorino	Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta
	040-P	Identification of *Mycobacterium pseudoshottsii* in Italy	Paolo Pastorino	Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta
	041-P	Elucidation of the role of *Tenacibaculum* spp. in atypical winter ulcer in sea-farmed Atlantic salmon in Norway	Anne Berit Olsen	Norwegian Veterinary Institute
	042-P	Phylogenetic diversity among *Aliivibrio wodanis* isolates from winter ulcer outbreaks in Norwegian semi-closed containment farming of Atlantic salmon post smolt	Leif Lotherington	Faculty of Veterinary Medicine, Norwegian University of Life Sciences

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Bacterial Diseases	043-P	Short-term immune responses of meagre (*Argyrosomus regius*) juveniles against *Photobacterium damselae piscicida*	Paulo Santos	Centro Interdisciplinar de Investigação Marinha e Ambiental
	044-P	Detection of virulence genes related with tissue invasion in *Tenacibaculum maritimum*	Beatriz S. Torres	Facultade de Bioloxía-CIBUS, Universidade de Santiago de Compostela
	045-P	Epitheliocystis in Nile tilapia (*Oreochromis niloticus*) in Costa Rica	Maricruz Guevara Soto	National Technical University of Costa Rica
	046-P	The expression analysis of hemoglobin gene in Japanese flounder infected with *Edwardsiella piscicida*	Misato Mori	College of Bioresouce Sciences, Nihon university
Parasitological Diseases	047-P	Parasites of *Trachurus capensis* and *T. trecae* in the Benguela ecosystem	Cecile Reed	University of Cape Town
	048-P	*Contracaecum osculatum* larvae in the liver of Baltic cod and its impact on condition and mortality of the host	Magdalena Podolska	National Marine Fisheries Research Institute
	049-P	Diversity of metazoan parasites of mullid fishes from Tunisian coasts and their use as biological indicator of fish stocks	Chiraz Ben Saad	University of Tunis El Manar
	051-P	Lousey lice: Improving knowledge and control of *Argulus* fish lice	Rhi Hunt	Cardiff University
	052-P	Infection by *Myxobolus episquamalis* at wild flathead grey mullet (*Mugil cephalus* Linnaeus, 1758) Kerchenskyi preglass of the Black Sea	Anna Kazarnikova	Southern Scientific Center of RAS
	053-P	Histopathology and inflammatory response elicited by *Masenia nkomatiensis* (Digenea) in the intestine of *Clarias gariepinus* (Clariidae)	Jose Chissiua Dumbo	Department of Zoology, University of Johannesburg
	054-P	*Perkinsus*-like organism in farmed rainbow trout (*Oncorhynchus mykiss* Walbaum) in South-Western Norway	Herman Høgenes Kvinnsland	FoMAS- Fiskehlelse og Miljø AS
	055-P	*Anisakis simplex* in *Crangon crangon* and *Contracaecum osculatum* in *Gammarus* sp. found *in situ* in the stomach of Baltic cod	Joanna Pawlak	National Marine Fisheries Research Institute, Gdynia, Poland
	056-P	Impacts of temperature and salinity on the survival and invasion ability of two *Anisakis* spp. (Nematoda: Anisakidae) *in vitro*	Tiago Gomes	Department of Aquatic Bioscience, Graduate School of Agricultural and Life Sciences, The University of Tokyo

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Parasitological Diseases	057-P	Outbreak of nodular gill disease in farmed brook trout (*Salvelinus fontinalis*)	Francesco Quaglio	Department of Comparative Biomedicine and Food Science, University of Padova
	058-P	Methacarn preserves mucus integrity and improves visualisation of amoebae in gills of Atlantic salmon (*Salmo salar* L.)	Carolina Fernandez	University of Stirling
	059-P	Cryopreservation of *Paramoeba perurans*	Christiane Trösse	Department of Biological Sciences, University of Bergen
	060-P	Is amyloodiniosis a neglected disease in aquaculture research?	Márcio Moreira	Portuguese Institute for the Ocean and Atmosphere, Aquaculture Research Station
	061-P	First observation of the North American *Posthodiplostomum centrarchi* Hoffman, 1958 in Hungary	Gábor Cech	Institute for Veterinary Medical Research, Centre for Agricultural Research, Hungarian Academy of Sciences
	062-P	Differential effects of host responses in common carp and common bream against 3rd stage larvae of *Contracaecum rudolphii* type B	Csaba Székely	Institute for Veterinary Medical Research, Centre for Agricultural Research, Hungarian Academy of Sciences, Budapest
	063-P	First data on the presence of *Anguillicola crassus* in European eel from the Segura river basin (SE Iberian Peninsula)	Pilar Muñoz	Departamento de Sanidad Animal, Universidad de Murcia, Campus de Espinardo
	064-P	Unidentified haplosporidian-like organism parasitizing gray mussel, *Crenomytilus grayanus* from Gangneung on the East Sea of Korea	Young-Ghan Cho	Jeju National University
	065-P	Molecular characterization of *Urosporidium* sp. parasitizing metacercaria of *Parvatrema duboisi* in the Manila clam on the West coast of Korea	Young-Ghan Cho	Jeju National University
	066-P	Fecundity of the *Ceratothoa oestroides* (Risso, 1816) on farmed sea bass (*Dicentrarchus labrax*) in the Adriatic Sea	Slavica Čolak	Cromaris d.d.
	067-P	Health status of *Pinna nobilis* in the Croatian part of eastern Adriatic coast	Tomislav Šarić	University of Zadar
	068-P	Early detection of *Cardicola* (Trematoda: Aporocotylidae) eggs in hatchery-reared Atlantic bluefin tuna (*Thunnus thynnus* L.)	Pilar Muñoz	Departamento de Sanidad Animal, Universidad de Murcia, Campus de Espinardo
	069-P	Effects of water exchange rate on the diplomonad flagellate *Spironucleus salmonis* infection in juvenile salmonid fish	Shigehiko Urawa	Hokkaido National Fisheries Research Institute

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Parasitological Diseases	070-P	A retrospective study on parasites of Atlantic lumpfish (*Cyclopterus lumpus* L.) used as a cleaner fish in Norwegian salmonid aquaculture.	Toni Erkinharju	Norwegian Veterinary Institute
	071-P	Development of alternative, ecologically safe, effective and well-tolerated control strategies against *Ichthyophthirius multifiliis*	Verena Jung-Schroers	University of Veterinary Medicine
	072-P	Nodular gill disease in Piedmont region (Italy): preliminary data	Paolo Pastorino	Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta
	073-P	Recurrent infection by *Anisakis* spp. in the European hake fishery	Helena Rodríguez	Instituto de Investigaciones Marinas
	074-P	Gross lesions of muscle parasites in Atlantic swordfish	Helena Rodríguez	Instituto de Investigaciones Marinas
	075-P	Trophic transmission of *Rhadinorhynchus* spp. from mesozooplankton (Euphausiacea) to small pelagic fishes in the nw Iberian Peninsula	Helena Rodríguez	Instituto de Investigaciones Marinas
	076-P	Unravelling the assumed relationship between a healthy and a sustainable fishery	Helena Rodríguez	Instituto de Investigaciones Marinas
	077-P	Source, transmission and development of *Ichthyophonus hoferi* infection in the Icelandic summer-spawning herring	Hrólfur S. Pétursson	Institue For Experimental Pathology, University of Iceland
	078-P	Biochemical and proteomic characterisation of secretory proteins from the protozoan parasite *Paramoeba perurans* revealed by an *in vitro* model	Kerrie Ní Dhufaigh	Galway-Mayo Institute of Technology
	079-P	Emerging enteric parasitic diseases in farmed gilthead sea bream (*Sparus aurata*)	Maria Letizia Fioravanti	Department of Veterinary Medical Sciences, Alma Mater Studiorum Università di Bologna
	080-P	Infections of *Glugea hertwigi* in juvenile smelt *Osmerus eperlanus* – does warmer and slower reduce survival of the fattest?	Joanna James	Environment Agency
	081-P	Transfer of *Sparicotyle chrysophrii* and *Ceratothoa oestroides* between wild and aquaculture fish inferred by ddRAD sequencing	Ivona Mladineo	Institute of Oceanography and Fisheries
Diseases of Public Concern	082-P	Emergence of the zoonotic biliary trematodes (Opisthorchiidae) in fish of North-Western Russia	Satu Viljamaa-Dirks	Aquatic Animal Disease Department, Faculty of Veterinary Medicine, Bursa Uludag University
	083-P	Identification of the new *Pseudomonas* species for aquaculture and important biochemical characteristics	Muhammed Duman	University Department of Marine Studies, University of Split
	084-P	Functional interpretation of *Anisakis pegreffii* infective third stage larvae transcriptomes in accidental and paratenic hosts	Željka Trumbić	University Department of Marine Studies, University of Split
	085-P	*Anisakis* spp. L3 larva revealed by transmission electron microscopy (TEM)	Ivona Mladineo	Institute of Oceanography and Fisheries

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Aquatic Animal Epidemiology	087-P	**Fish welfare – big brother is watching you**	**Arndt Christian Hofmann**	Friedrich-Loeffler-Institut Insel Riems
	088-P	**Acquired immunity in freshwater aquaculture systems can mitigate pathogen risks to wild fish**	**Mickael Teixeira Alves**	Cefas
	089-P	**Long term data on *R. salmoninarum* screening of wild Atlantic salmon broodfish in Icelandic rivers**	**Edda Björk Hafstað Ármannsdóttir**	Institute for Experimental Pathology, University of Iceland
	090-P	**Epidemiological study on the occurrence and the pathogenicity of the carp edema virus (CEV) in fish in Germany**	**Verena Jung-Schroers**	University of Veterinary Medicine
	091-P	**A generic model for assessing risk of introduction and spread of viral diseases in mediterranean sea bass and sea bream farms**	**Saraya Tavornpanich**	Norwegian Veterinary Institute
	093-P	**Sequence analysis of the HPR and F-gene of HPR0 isolates of ISAV in Iceland**	**Thorunn S. Bjornsdottir**	Institute for Experimental Pathology, University of Iceland
Emerging and Alien Pathogen Species	094-P	**Thermoadaptation of *Aeromonas salmonicida*, widening of host species window**	**Heike Schmidt-Posthaus**	Centre for Fish and Wildlife Health, Vetsuisse Faculty, University Bern
	095-P	**Histopathology caused by the alien fish parasite *Neoergasilus japonicus* on the skin of its hosts in south Africa**	**Annemarie Avenant-Oldewage**	University of Johannesburg
	096-P	**Whole-genome analysis of *Lactococcus petauri* isolated from lactococcosis case in rainbow trout: first case reported in Greece**	**Konstantina Bitchava**	Hellenic Agricultural Organisation-DEMETER, Veterinary Research Institute of Thessaloniki Thermi
	097-P	**Presence and genetic variability of piscine orthoreovirus genotype 3 (PRV-3) in Denmark**	**Argelia Cuenca**	European Union Reference Laboratory for Fish and Crustacean Diseases, DTUaqua
	098-P	**From detection to regulation – 20 years of new & emerging diseases in freshwater fisheries**	**Joanna James**	Environment Agency
	099-P	**Carp edema virus (CEV) in Polish carp aquaculture**	**Magdalena Stachnik**	National Veterinary Research Institute
	100-P	**Identification and molecular characterisation of iridoviruses of sturgeon in Poland**	**Magdalena Stachnik**	National Veterinary Research Institute

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Bio-security in Aquaculture and Veterinary Labs	101-P	**A systematic risk profiling for Mediterranean Sea bass and sea bream farms**	**Margarida Leandro**	Faculdade de Medicina Veterinária, Universidade de Lisboa
Viruses and Viral Diseases	103-P	**Presence of carp edema virus in aquaculture of the Czech Republic in 2017 – 2018**	**Dagmar Pokorova**	Veterinary Research Institute
	104-P	**Presence of piscine orthoreovirus 3 confirmed in wild brown trout (*Salmo trutta fario*) in the Czech Republic**	**Lubomir Pojezdal**	Veterinary Research Institute
	105-P	**First detection of a sturgeon mimivirus in Ukraine**	**Laurent Bigarré**	Agence Nationale de Sécurité Sanitaire des Aliments
	106-P	**Development of genetic markers associated with resistance to herpesviral hematopoietic necrosis in goldfish**	**Motohiko Sano**	Tokyo University of Marine Science and Technology
	107-P	**Effect of FBS concentration variation on fish cell lines inoculated with CYHV-3**	**Hyoung Jun Kim**	National Fishery Products Quality Management Services
	108-P	**Amino acid substitutions in the polymerase N-terminal region of a reassortant betanodavirus strain affect its replication capacity at high temperatures**	**Isabel Bandín**	Instituto de Acuicultura-Departamento de Microbiología, Universidade de Santiago de Compostela
	109-P	**Influence of infectious pancreatic necrosis virus on humoral immune response in rainbow trout**	**Joanna Pajdak-Czaus**	University of Warmia and Mazury
	110-P	**Development of a model system for studying cell-mediated immune responses to salmonid alphavirus**	**Kimberly Veenstra**	Friedrich-Loeffler-Institut
	112-P	**Transcriptomic analysis of rhabdovirus infected rainbow trout and flounder cell lines**	**Miyoung Cho**	Pathology Research Division, National Institute of Fisheries Science
	113-P	**Study on tissue tropism of VHSV in juvenile olive flounder using *in situ* hybridization (RNA-ISH)**	**Syed Shariq Nazir Qadiri**	Department of Aqualife Medicine, Chonnam National University
	114-P	**Histopathological characterization and immuno-histochemical detection of VHSV in tissues of juvenile olive flounder**	**Syed Shariq Nazir Qadiri**	Department of Aqualife Medicine, Chonnam National University

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Viruses and Viral Diseases	115-P	Susceptibility of finnish rainbow trout to three different genogroups of IPNV: an infection trial	Anna Maria Eriksson-Kallio	Finnish Food Authority
	116-P	Sequencing of fish viruses: quality data assurance for NGS bioinformatics	Valentina Panzarin	IZSVe
	117-P	Using nanopore sequencing for whole genome sequencing of viruses from aquaculture	Andrew Tighe	Marine Institute
	118-P	Steric exclusion chromatography as a method for purification of koi herpesvirus	Lisa Katharina Jordan	Institute of Bioprocess Engineering, Friedrich-Alexander University Erlangen-Nürnberg
	119-P	A newly developed carp cell line for *in vitro* replication of cyprinid herpesvirus-3	Lisa Katharina Jordan	Institute of Bioprocess Engineering, Friedrich-Alexander University Erlangen-Nürnberg
	120-P	*Origanum vulgare* and *Cinnamomum zeylanicum* essential oils as health promoters in gilthead sea bream experimentally infected with lymphocystis disease virus	Eleni Golomazou	Department of Ichthyology and Aquatic Environment, Aquaculture Laboratory, School of Agricultural Sciences, University of Thessaly
	121-P	Viability of infectious haematopoietic necrosis virus (IHNV) and viral haemorrhagic septicaemia virus (VHSV) adsorbed to sediment and soil	Claire Joiner	Cefas
	122-P	The selective breeding of rainbow trout for resistance to viral haemorrhagic septicaemia (VHS) using few parental fish	Takafumi Ito	Diagnosis and Training Center for Fish Diseases, National Research Institute of Aquaculture, Fisheries Research Agency
	123-P	Betanodavirus infection in gilthead sea bream larvae: an immunohistochemical study	Francesco Pascoli	Istituto Zooprofilattico Sperimentale delle Venezie
	124-P	Lumpfish (*Cyclopterus lumpus*) is susceptible to viral nervous necrosis: result of an experimental infection with different genotypes of betanodavirus	Anna Toffan	Istituto Zooprofilattico Sperimentale delle Venezie
	125-P	Study of the occurrence and genetic diversity of CEV strains circulating in France through the use of optimized diagnostic tools	Morin Thierry	French Agency for Food, Environmental and Occupational Health & Safety
	126-P	Susceptibility of rainbow trout (*Oncorhynchus mykiss*) fed with fishmeal substitutes (*Hermetia illucens*, *Arthrospira platensis*) to the viral haemorrhagic septicaemia virus	Mikolaj Adamek	University of Veterinary Medicine
	127-P	Confirmation of spring viremia of carp virus in wild common carp (*Cyprinus carpio* L.) in Mexico	Cesar Ortega	Universidad Autónoma del Estado de México
	128-P	Unravelling the pathogenesis of salmon gill poxvirus in freshwater Atlantic salmon	Rosa Allshire	Institute of Aquaculture, University of Stirling

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Viruses and Viral Diseases	129-P	Haemathology of common carp (*Cyprinus carpio* L.) in field cases of spring mortality	Veronika Piackova	University of South Bohemia
	130-P	Molecular detection of a novel cyprinid herpesvirus in roach (*Rutilus rutilus*) and asp (*Leuciscus aspius*)	Andor Doszpoly	Institute for Veterinary Medical Research, Centre for Agricultural Research, Hungarian Academy of Sciences
	131-P	It is everywhere! Detection of carp edema virus in Hungary, Croatia, Serbia and Lithuania confirm wide distribution in Europe	Mikolaj Adamek	University of Veterinary Medicine
	132-P	Phylogeny of viral haemorrhagic septicaemia virus (VHSV) based on full genome sequences	Angelica Cuenca	European Union Reference Laboratory for Fish and Crustacean Diseases, DTU aqua
	133-P	Abandon all hope? Is *in vitro* culturing of carp edema virus a lost cause?	Mikolaj Adamek	University of Veterinary Medicine
	134-P	The influence of virus infection on cell line characteristics: CYHV-3, CCPV and CEV VS new cell lines from common carp	Mikolaj Adamek	University of Veterinary Medicine
	135-P	Carp oedema virus: a new threat for the cyprinids inhabiting open water	Snježana Zrnčić	Croatian Veterinary Institute
	136-P	Virulence factors in VHSV: which replication step is responsible for VHSV strains virulence?	Carlos P. Dopazo	Departamento de Microbiología y Parasitología. Instituto de Acuicultura, Universidade de Santiago de Compostela
	137-P	Atlantic salmon pseudobranch tissue: a potential link in the pathogenesis of salmonid alpha virus	Simon Weli	Norwegian Veterinary Institute
	138-P	Studies into an *in vitro* system for tilapia lake virus replication	Mikolaj Adamek	University of Veterinary Medicine
	139-P	Phylogenetic analysis and genetic diversity of infectious hematopoietic necrosis virus (IHNV) isolates in Japan over the past 10 years	Aki Namba	Nihon University
	140-P	Susceptibility of European rainbow trout to a ranavirus isolates	Ewa Borzym	Department of Fish Disease, National Veterinary Research Institute
	141-P	Whole genome sequencing of the piscine myocarditis virus (PMCV) directly from field samples	Maria M. Dahl	Starvstovan
	142-P	Lymphocystis disease in flounder from the south Baltic Sea	Magdalena Stachnik	National Veterinary Research Institute
	143-P	Infection dynamics of PMCV infection in Atlantic salmon	Oystein Evensen	Norwegian University of Life Sciences

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Host-parasite Interactions	145-P	Myxosporidian infection of grey mullet, *Mugil cephalus*, in Russian waters of the Black Sea	Anna Kazarnikova	Souther Scieific Center of Russian Academy of Scieces
	146-P	Skin and mucosal responses of rainbow trout and Atlantic salmon to sea lice (*Lepeophtheirus salmonis*) infection	Rebecca Heavyside	Skretting ARC
	149-P	Characterising association of *Neoparamoeba perurans* to RTGILL-W1 cells in an *in vitro* model for amoebic gill disease (AGD)	Patrick Hooper	Biosciences, College of Life & Environmental Sciences, Geoffrey Pope Building, University of Exeter
	150-P	Development a dynamic *in vitro* model of host-pathogen interactions for amoebic gill disease (AGD)	Patrick Hooper	Biosciences, College of Life & Environmental Sciences, Geoffrey Pope Building, University of Exeter
	151-P	A multi-modal approach for investigating host-parasite interactions associated with the infection of European sea bass by *Amyloodinium ocellatum*	Marco Galeotti	Dipartimento di Scienze AgroAlimentari, Ambientali e Animali, University of Udine
	152-P	Influence of host vertical distribution on parasitism: patterns of trematode infection in the cockle *Cerastoderma edule*	Simão Correia	Departamento de Biologia & CESAM, Universidade de Aveiro
	153-P	Microbial communities of the external integuments and the gastrointestinal tract of fish at ecto- and endoparasites	Elena Kashinskaya	Institute of Systematics and Ecology of Animals of Siberian Branch of Russian Academy of Sciences
	154-P	Immune response of sea bass peripheral blood leukocytes to *Anisakis pegreffii* crude extract: what does RNA-seq reveal?	Ivana Bušelić	Institute of Oceanography and Fisheries
	155-P	Attempts to culture carp edema virus on *in vitro* gill primary cell epithelia in asymmetrical conditions	Richard Paley	Centre for Environment, Fisheries and Aquaculture Science
	156-P	Comparative transcriptomics analysis reveals immune evasion associated with higher virulence of viral haemorrhagic septicaemia virus *in vitro*.	Ronny van Aerle	International Centre of Excellence for Aquatic Animal Health, Cefas Weymouth Laboratory
	157-P	Characteristics of tapeworm-produced proteinase inhibitors and their possible role in fish-cestode interactions	Mikhail Solovyev	Institute of Systematics and Ecology of Animals

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Diseases of Wild and Ornamental Fish	158-P	First report of horizontal transmission and infection of *Piscirickettsia salmonis* between *Eleginops maclovinus* and *Oncorhynchus mykiss* in experimental conditions	Juan Carlos Quintanilla	Instituto de Fomento Pesquero
	159-P	Pathological effects of *Cichlidogyrus philander Douëllou*, 1993 (Monogenea, Ancyrocephalidae) on the gills of *Pseudocrenilabrus philander* (Weber, 1897) (Cichlidae)	Annemarie Avenant-Oldewage	University of Johannesburg
	160-P	Granulomatous aerocystitis by *Phoma herbarum* in a wild greater amberjack (*Seriola dumerili* Risso)	Carolina De Sales-Ribeiro	Fish Pathology Unit, Institute for Animal Health and Food Safety (IUSA), Veterinary School, University of Las Palmas de Gran Canaria
	161-P	Diversity of microscopic cnidarians parasites of ornamental fish from Amazon basin	Patrick Mathews Delgado	Department of Zoology, Institute of Biosciences, University of São Paulo
	162-P	Microbiological and pathological findings in koi carp (*Cyprinus carpio*) affected by swim bladder flooding	Sara Ciulli	University of Bologna
	163-P	Endohelminth parasites of albacore, *Thunnus alalunga*, from Madeira archipelago, Eastern Atlantic	Margarida Hermida	Marine and Environmental Sciences Centre
	164-P	Detection of infectious spleen and kidney necrosis virus (ISKNV) in ornamental fish in Germany	Verena Jung-Schroers	University of Veterinary Medicine
	165-P	Intraepithelial hyaline globules (thanatosomes) occurring in the gut of a *Rhyna ancylostoma*	Gian Enrico Magi	School of Biosciences and Veterinary Medicine, University of Camerino
	166-P	Description of a hamartoma-type odontoma in angelfish (*Pterophyllum scalare*)	Cesar Ortega	Centro de Investigación y Estudios Avanzados en Salud Animal, Universidad Autónoma del Estado de México
	167-P	Swim bladder mycosis in *Polyprion americanus*	Ana Losada	Universidade de Santiago de Compostela
	169-P	Mysterious syndrome causing high mortality in wild brown trout in eastern Switzerland, similar to proliferative darkening syndrome	Heike Schmidt-Posthaus	Centre for Fish and Wildlife Health, Department of Infectious Diseases and Pathobiology, Vetsuise Faculty, University Bern

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Diseases of Uncertain Aetiology	170-P	Invagination caused by adenocarcinoma in rainbow trout (*Oncorhynchus mykiss*, Walbaum 1792)	Márton Hoitsy	Kaposvár University, Animal Science Doctoral School
	171-P	European sea bass in a recirculating aquaculture system presenting petechial rash-like skin lesions	Albert Girons	ICTIOVET
	172-P	Immunoreactivity of red mark syndrome (RMS) trout skin to TLR5	Gian Enrico Magi	School of Biosciences and Veterinary Medicine, University of Camerino
	173-P	Rainbow trout (*Oncorhynchus mykiss*) red mark syndrome - a standardised approach to histopathological scoring	Massimo Orioles	Università degli studi di Udine
Immunomodulators and Aquatic Animal Health	174-P	Effect of the HMB on nonspecific defence mechanisms and protection against *Shewanella putrefaciens* infections in carp (*Cyprinus carpio*)	Andrzej Siwicki	Department of Fish Pathology and Immunology, Inland Fisheries Institute in Olsztyn
	175-P	Proteomic comparison of *Ostrea edulis* granulocytes and hyalinocytes after *in vitro* stimulation with immune response inducers	Antonio Villalba	Centro de Investigacións Mariñas
	176-P	Influence of bacteriophages cocktail on European eel (*Anguilla anguilla*) immunity	Andrzej Siwicki	Department of Fish Pathology and Immunology, Inland Fisheries Institute
	177-P	Influence of bacteriophages cocktail on European eel (*Anguilla anguilla*) survival after experimental challenge	Andrzej Siwicki	Department of Fish Pathology and Immunology, Inland Fisheries Institute
	178-P	Stimulation of innate immunity in huchen (*Hucho hucho*) growing in an intensive culture system	Andrzej Siwicki	Department of Fish Pathology and Immunology, Inland Fisheries Institute
	179-P	Influence of effective microorganisms on the defence mechanisms of pikeperch	Elżbieta Terech-Majewska	University of Warmia and Mazury
	180-P	Effect of dietary β-glucan on oxidative stress biomarkers in the muscle tissue of rainbow trout (*Oncorhynchus mykiss*, Walbaum)	Elżbieta Terech-Majewska	University of Warmia and Mazury
	182-P	Recombinant flagellin and its ND1 domain from *Vibrio anguillarum* promote *in vivo* overexpression of IL-1β and IL-8 in *Salmo salar*	Roxana González-Stegmaier	Laboratorio de Biología Molecular de peces. Instituto de Bioquímica y Microbiología, Universidad Austral de Chile
	183-P	Molecular insights and functional analysis of copper-zinc-superoxide dismutase in redlip mullet, *Liza haematocheilia*	Jehee Lee	Department of Marine Life Sciences and Fish Vaccine Research Center, Jeju National University

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Immunomodulators and Aquatic Animal Health	184-P	Molecular characterization of C-FOS homolog in red lip mullet (*Liza haematocheila*) and its potential immune role in fish immunity	Gabin Kim	Department of Marine Life Sciences & Fish Vaccine Research Center, Jeju National University
Antimicrobial Resistance in Fish and Shellfish	185-P	The underestimated danger: antibiotic resistance in aquaculture and pet fish	Heike Schmidt-Posthaus	Centre for Fish and Wildlife Health, Vetsuisse Faculty, Unversity of Bern
	186-P	Antimicrobial activity of the sea urchin *Paracentrotus lividus* coelomic fluid against pathogenic bacterial strains from fish and shellfish	Ana García	Centro Interdisciplinar de Investigação Marinha e Ambiental
	187-P	Shellfish as an exemplar for assessing the burden of antimicrobial resistance in the environment	Edel Chambers	Cefas
	188-P	Multiresistant *Aeromonas salmonicida* subsp. *salmonicida*: presence and transfer of antibiotic resistance determinants	Lotta Landor	Laboratory of Aquatic Pathobiology, Åbo Akademi Univeristy
	189-P	Development of antibiotic resistances in bacteria isolated between 2005 and 2018 from fish for food production and ornamental fish	Verena Jung-Schroers	University of Veterinary Medicine
	190-P	The CEFAS aquatic AMR centre of excellence	David Verner-Jeffreys	Cefas
	191-P	A reproducible plate-based method to assess disruption of *Yersinia ruckeri* biofilm by phytobiotic extracts	Tharangani Herath	Department of Animal Production, Welfare and Veterinary Sciences, Harper Adams University
Co-infections and Multiple Stressors	192-P	Multiple co-infections and environmental stressors as causes of chronic mortalities in juvenile sturgeons (*Huso huso*)	Sara Ciulli	Department of Veterinary Medical Sciences, University of Bologna
	193-P	Component causes of severe gill damage in rainbow trout farmed under conditions of RAS	Miroslava Palikova	Mendel University
	194-P	Pathogen interactions during experimental co-infection with *Piscirickettsia salmonis* and piscine orthoreovirus in *Salmo salar*	Isabel Aguirre-Gil	Laboratorio de Biotecnología y Patología Acuática, Universidad Austral de Chile

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Fish and Shellfish Immunology	195-P	Bacterial outer membrane vesicles of *Aeromonas salmonicida* induce a proinflammatory immune response *in vitro* and *in viv*o	Sven Ostermann	Friedrich-Löffler Institute, Institute of Immunology
	196-P	Mechanism of interleukin 12 production against intracellular bacterial infection in amberjack *Seriola dumerili*	Megumi Matsumoto	Tokyo University of Marine Science and Technology
	197-P	Interaction between the soluble- and membrane-forms of TLR5 induces expression of IL-1β gene in Japanese flounder, *Paralichthys olivaceus*	Masahiro Sakai	Faculty of Agriculture, University of Miyazaki
	198-P	Evidence of IGD-secreting plasmablasts and specific molecular signatures in rainbow trout gills and gut	Ottavia Benedicenti	Animal Health Research Center, Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria
	199-P	Identification of the immune genes of *Paracentrotus lividus* involved in response to *Vibrio anguillarum* bacterial challenge	Sérgio Fernandéz-Boo	Laboratorio de Biotecnología y Patología Acuática, Universidad Austral de Chile
	200-P	Rockfish (*Sebastes schlegelii*) MYD88 molecular identification and functional analysis	Jehee Lee	Marine Molecular genetics LAB, Department of Marine Life Sciences, School of Marine Biomedical Sciences
	201-P	Effect of a commercial immunostimulant on the immune performance and immune-related gene expression of meagre (*Argyrosomus regius*) juveniles	Teresa Baptista	Marine and Environmental Sciences Centre, Instituto Politécnico de Leiria
	202-P	Hallmark pro-inflammatory cytokines of lumpfish (*Cyclopterus lumpus*)	Gyri Teien Haugland	University of Bergen, Department of Biological Sciences
	203-P	Characterization and immune responses of liver-expressed antimicrobial peptide 2A (LEAP 2A) from redlip mullet (*Liza haematocheila*)	Hyerim Yang	Jeju National University
	206-P	A key regulator of the mitochondrial apoptotic pathway, bax from redlip mullet (*Liza haematochelia*): molecular characterization and expression analysis	Hyerim Yang	Jeju National University
	207-P	Molecular and transcriptional analysis of peroxiredoxin 3 (HAPRX3), and its innate immune responses in big belly seahorse (*Hippocampus abdominalis*)	Sukkyoung Lee	Jeju National University
	208-P	Molecular characterization, and expression analysis of calreticulin from big belly seahorse *Hippocampus abdominalis*	Jehee Lee	Jeju National University

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	209-P	Antiviral activity against VHSV infection, transcriptional regulation in response to immune stimulants of IRF6 And IRF8 in *Hippocampus abdominalis*	Jehee Lee	Jeju National University
Fish and Shellfish Immunology	210-P	*In silico* study of the genes involved in alternative complement system in big-belly seahorse *Hippocampus abdominalis*	Tae Hyug Jeong	Fish Vaccine Research Center, Jeju National University
	211-P	Immune response of koi carp and amur wild carp infected with KHV	Radek Machat	Veterinary Research Institute
	212-P	Molecular cloning and functional analysis of B cell activating factor in rockfish (*Sebastes schlegelii*)	Jehee Lee	Marine Molecular genetics LAB, Department of Marine Life Sciences, School of Marine Biomedical Sciences
	213-P	Diverse rainbow trout lineage susceptibilities to PKD and furunculosis	Miroslava Palikova	Mendel University
	214-P	Rainbow trout express several PRDM1/BLIMP-1 genes	Pedro Perdiguero	Animal Health Research Center
	215-P	Characterization of a specific monoclonal antibody against CD8A in koi carp (*Cyprinus carpio*)	Jinhong Chun	Gyeongsang National University
	216-P	Molecular characterization and structural analysis of CD4 homologues in brown trout (*Salmo trutta*)	Hassan Ashfaq	Clinical Division of Fish Medicine, University of Veterinary Medicine
	217-P	*In vitro* effect of temperature on phagocytic activity in rainbow trout (*Onchorhynchus mykiss*)	Hana Minarova	Veterinary Research Institute
	218-P	TLRS and TLR signaling in lumpfish (*Cyclopterus lumpus* L.)	Gyri T. Haugland	University of Bergen
	219-P	Comparative analysis of immune related genes in teleost responding to bacterial infection from transcriptomic data	Shih-Chu Chen	National Pingtung University of Science and Technology
	220-P	Evaluation of zebrafish (*Danio rerio*) susceptibility to new viral infections and its utilisation in C-type lectin receptor studies	Mikolaj Adamek	University of Veterinary Medicine
	221-P	Influence of triploydy in lysc and lysg expression in response to *Aeromonas jandaei* infection in the Brazilian fish *Astyanax altiparanae*	Mateus Carriero	Department of Veterinary Medicine, Faculty of Animal Science and Food Engineering, University of São Paulo
	222-P	Zebrafish c-reactive protein-like molecules inhibit interrelated SVCV replication and autophagy pathways	Beatriz Novoa	Instituto de Investigaciones Marinas (IIM), Consejo Superior de Investigaciones Científicas (CSIC)

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Fish and Shellfish Immunology	223-P	Interaction between *Vibrio splendidus* and the immune system of *Mytilus galloprovincialis*	Antonio Figueras	Instituto de Investigaciones Marinas, Consejo Superior de Investigaciones Científicas
	224-P	Evaluation of toxin A/B-specific recombinant antibodies and the effect on the virulence of *Vibrio parahaemolyticus*	Jassy Mary Lazarte	Laboratory of Aquatic Animal Diseases, College of Veterinary Medicine, Gyeongsang National University
	225-P	Potential application of recombinant antibodies from hagfish variable lymphocyte receptor (VLR) gene: a novel alternative antibody	Tae Sung Jung	Laboratory of Aquatic Animal Diseases, College of Veterinary Medicine, Gyeongsang National University
	226-P	RNA-SEQ gives insights into mechanism behind different levels of koi herpesvirus disease resistance in common carp strains	Mikolaj Adamek	University of Veterinary Medicine
	228-P	Transcriptome analysis shows that concurrent IFN-I Treatment and SAV3 infection enriches the MHC-I antigen processing and presentation pathways in TO-cells	Cheng Xu	Norwegian University of Life Sciences
Diagnostics	230-P	Development of new primers for detection of *Shewanella* spp.	Ewa Paździor	National Veterinary Research Institute, Department of Fish Diseases
	231-P	New PCR tools for the detection and genetic characterization of percid perhabdoviruses	Laurent Bigarré	Agence Nationale de Sécurité Sanitaire
	232-P	Koi herpesvirus (KHV) outbreak causing mass mortality of carp in Iraq	Anna Toffan	Istituto Zooprofilattico Sperimentale delle Venezie
	233-P	OIE laboratory twinning project: improving the IRVT diagnostic capacity for viral encephalopathy and retinopathy of marine fish	Anna Toffan	Istituto Zooprofilattico Sperimentale delle Venezie
	234-P	Importance of the 3'-terminal nucleotide of the forward primer for conventional RT-PCR for VHSV gene detection	Hyoung Jun Kim	National Fishery Products Quality Management Services
	235-P	Development of real-time PCR with a PNA-probe-based melting curve analysis for the detection of WSSV	Youngjin Kim	National Fishery Products Quality management Services
	236-P	Identification of the zoonotic clonal complex of *Vibrio vulnificus* pathovar *piscis* by MALDI-TOF	Olga Haenen	Fish, Crustacean and Shellfish Disease Laboratory, Wageningen Bioveterinary Research

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Diagnostics	237-P	Novel histological evidence of atrio-ventricular (AV) node in Atlantic salmon (*Salmo salar* L.)	Muhammad Naveed Yousaf	Skretting Aquaculture Research Center, Stavanger
	238-P	Multiple liposarcomas in farmed Russian sturgeon (*Acipenser gueldenstaedtii* Brandt & Ratzeburg) in France: first gross and histopathological description	Sophie Labrut	LABOCEA
	239-P	Evaluation of a gross "total" gill score against a standardized histologic score (and qPCR) in farmed Atlantic salmon (*Salmo salar*)	Liv Østevik	Fish Vet Group
	240-P	MHC gene as genetic marker of resistance to bacterial and viral disease: environmental pressure as enhancer of haplotype frequency shifts	Paolo Pastorino	Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta
	241-P	Low-cost, simple and reliable SNP genotyping method for discriminating subspecies and subpopulations of fish pathogen, *Nocardia seriolae*	Cuong Le	GeneCology Research Centre, University of the Sunshine Coast
	242-P	Detection of the microsporidian *Nucleospora cyclopteri* in tissue samples from lumpfish (*Cyclopterus lumpus*) using *in situ* hybridization (ISH)	Haakon Hansen	Norwegian Veterinary Institute, Fish Health Research Group
	243-P	Evaluation of histological postmortem changes in Norwegian farmed Atlantic salmon (*Salmo salar* L.) at varied time intervals and storage temperatures	Toni Erkinharju	Norwegian Veterinary Institute
	244-P	Toward the design of nanomaterials-based sensing e-bioplatform for nodavirus detection to assess fish health status in fish farms	Nadia Chérif	National Institute of Sea Sciences and Technologies
	245-P	Diagnostic methods for identification of *Aeromonas* spp. and examination of pathogenicity factors, cytotoxicity and adherence to fish mucus	Verena Jung-Schroers	University of Veterinary Medicine
	246-P	Nothing is as simple as it seems - quantitative diagnostics of gill diseases in koi reveals co-infection with multiple pathogens	Mikolaj Adamek	University of Veterinary Medicine
	247-P	Methods for identification and differentiation of *Shewanella* spp. isolates from diagnostic samples	Verena Jung-Schroers	University of Veterinary Medicine
	248-P	Molecular evidences that the cell line CHSE-214 is derived from the salmon *Oncorhynchus tshawytscha* rather than the bluegill *Lepomis macrochirus*	Simon Menanteau-Ledouble	Klinische Abteilung für Fischmedizin
	249-P	Are early inflammatory lesions in *Sparus aurata* indicative of the hatchery phase quality? Invisible injuries as essential histological indicators	Valentina Pacorig	University of Udine
	250-P	Histology and anatomy of clinically healthy Atlantic lumpfish, *Cyclopterus lumpus*	Haakon Hansen	Norwegian Veterinary Institute, Fish Health Research Group

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Diagnostics	251-P	Development of a point-of-care test for amoebic gill disease (AGD)	Irene Cano	Cefas
	252-P	Haematology and biochemistry in the assessment of turbot intestinal health	Ana Losada	Universidade de Santiago de Compostela
	253-P	Establishment and application of two brain cell lines from tilapia and hybrid snakehead for detection of tilapia lake virus	Qing Wang	Pearl River Fisheries Research Institute, Chinese Academy of Fishery Sciences
Aquatic Animal Welfare	254-P	The effect of sudden temperature decrease on common carp under experimental conditions	Nikola Hodkovicova	Department of Animal Protection, Welfare and Behaviour, Faculty of Veterinary Hygiene and Ecology, University of Veterinary and Pharmaceutical Sciences
	256-P	Illegal fishing with electro-fishing devices in the Po river basin, Emilia Romagna, Italy	Francesco Quaglio	University of Padua, Department of Comparative Biomedicine and Food Science
	257-P	Regulation of appetite gene expression in response to stress exposure in common carp (*Cyprinus carpio*)	Nicola Rhyner	Zurich University of Applied Sciences
	258-P	Can decapods successfully be stunned by electricity?	Thomas Wahli	Centre for Fish and Wildlife Health, University of Bern
	259-P	Effect of tank color in the pigment adaptation, cooked color, growth performance and immune response of the shrimp *Litopenaeus vannamei*	Sergio Fernández-Boo	Centro Interdisciplinar de Investigação Marinha e Ambiental
	260-P	Kidney pathology in form of nephrocalcinosis and inflamation in Atlantic salmon (*Salmo salar*) produced in hatcheries in Norway	Hanna Bjerke	Fish Health Service
	261-P	Stress affects rainbow trout macrophage capacity to reduce bacterial load after *in vitro* infection	Lorenzo Garcia Muñoz	UCM
	262-P	Effect of UV treatment on microbial community structure in inlet water sampled from two different land based aquaculture systems	Karine Drønen	Department of Biological Science, University of Bergen
	264-P	Development of essential prerequisites to monitor fish welfare in the framework of a national animal welfare monitoring in Germany	Dieter Steinhagen	University of Veterinary Medicine
	265-P	Spinal damages in eels after a possible passage through a hydroelectric power plant	Verena Jung-Schroers	University of Veterinary Medicine

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Aquatic Animal Welfare	266-P	A sanitary control scheme for *Garra rufa* welfare in Italian beauty centers	Paolo Pastorino	Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta
	268-P	Let's talk about stress: how to quantify the chronic stress level of the fish and its impact	Maaike Vercauteren	Ghent University, Faculty of Veterinary Medicin
	319-P	Improved health and better survival of farmed lumpfish after a probiotic bath with two strains of Aliivibrio spp.	Klakegg, Ø	Previwo AS
Molluscs and Crustacean Diseases	269-P	First histopathological survey of the chilean oyster *Ostrea chilensis* (Ostreae) in Pullinque ostrich reserve in southern Chile	Loreto Ovalle	Departamento de Salud Hidrobiológica, División de Investigación en Acuicultura, Instituto de Fomento Pesquero
	270-P	Genetic variability and *Perkinsus* infection level analysis to support founder population selection for a breeding program of *Ruditapes decussatus*	Andreia Cruz	Oceano Fresco S.A.
	271-P	Looking for hosts of *Marteilia cochillia* in the zooplankton	Antonio Villalba	Centro de Investigacións Mariñas, Consellería do Mar da Xunta de Galicia
	272-P	Sequence analysis of virulence genes, OMPU and VSM, and bath challenge using *Vibrio* isolates from Scottish blue mussels	Úna McCarthy	Marine Scotland Science
	273-P	Mass mortality events in marine protected areas: the case of *Pinna nobilis* (Mollusca, Bivalvia)	Maria Letizia Fioravanti	Dipartimento di Scienze Mediche Veterinarie, Alma Mater Studiorum Università di Bologna
	274-P	Observation of *Bonamia exitosa* (Haplosporidia) in European flat oyster (*Ostrea edulis*) at the Croatian Adriatic Sea	Dražen Oraić	Croatian Veterinary Institute
	275-P	Understanding the mortality event of *Polititapes rhomboides* in 2010 in Galicia (NW Spain)	Carmen López	Centro de Investigacións Mariñas
	276-P	Mitochondrial respiration in clams with haemocyte neoplasia, a case study with Baltic *Limecola balthica*	Anna Hallmann	Department of Pharmaceutical Biochemistry, Medical University of Gdańsk
	277-P	Preliminary microbiological and histopathological data on *Tritia mutabilis*	Sara Ciulli	Department of Veterinary Medical Sciences, University of Bologna
	278-P	Detection of OSHV-1 on the cephalopod *Octopus vulgaris*	María Prado-Álvarez	Marine Research Institute, Spanish National Research Council

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Molluscs and Crustacean Diseases	279-P	DNA methylation profiling on *Crassostrea gigas* families with different susceptibility to OSHV-1	María Prado-Álvarez	Marine Research Institute, Spanish National Research Council
	280-P	Bacteria-driven infections in an invasive *Rangia cuneata* from the Vistula lagoon, Poland	Katarzyna Smolarz	Department of Marine Ecosystem Functioning, University of Gdańsk
	281-P	Neoplastic disorder in bivalves from the gulf of Gdansk - genetic and immunological perspectives	Katarzyna Smolarz	Department of Marine Ecosystem Functioning, University of Gdańsk
	282-P	Screening for *Bonamia ostreae* in European flat oysters and Pacific oysters from the same areas of Limfjorden in Denmark	Lone Madsen	Technical University of Denmark, National Institute of Aquatic Resources
	283-P	High levels of a novel *Endozoicomonas* bacteriophage are linked to lower severity of the bacterial infection in king scallop	Irene Cano	Cefas

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Myxozoan Diseases	284-P	*De novo* genome sequencing project of the fish-parasitic *Myxobolus pseudodispar* (Myxozoa): preliminary results	Edit Eszterbauer	Institute for Veterinary Medical Research, Centre for Agricultural Research, Hungarian Academy of Sciences
	285-P	Genetic diversity of serine protease inhibitors in fish-parasitic Myxozoa (Cnidaria)	Edit Eszterbauer	Institute for Veterinary Medical Research, Centre for Agricultural Research, Hungarian Academy of Sciences
	287-P	Novel *Henneguya* species (Cnidaria, Myxozoa) parasitizing *Plagioscion squamosissimus* in the Amazon basin, Brazil	Edson Adriano	Federal University of São Paulo
	288-P	Putting together the puzzle: long term monitoring data give insight in the development of proliferative kidney disease	Thomas Wahli	Centre for fish and wildlife health, University of Bern
	290-P	Prospecting for malacosporeans infecting freshwater fish from the Amazon basin	Beth Okamura	Department of Life Sciences, Natural History Museum

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Prophylaxis and Treatment	292-P	Developing bioassays to determine effect of warm water bathing on salmon lice, *Lepeophtheirus salmonis*, a parasite of farmed Atlantic salmon	Melanie Andrews	Norwegian University of Life Science
	293-P	Proteolytic effect of commercial protease, NEUTRASE®, on viral membrane of fish viruses	Yeonhwa Jin	Friedich-Loeffler-Institut
	294-P	Praziquantel treatment of grass carp (*Ctenopharyngodon idella*) infecting with eye fluke (*Diplostomum* sp.) in field conditions	Eliška Zusková	University of South Bohemia
	295-P	Proteases as alternative disinfection agents against fish viruses?	Anna M. Becker	Friedrich-Alexander University Erlangen-Nürnberg
	296-P	The 'BEST' method for characterising the lumpfish (*Cyclopterus lumpus*) microbiome	Lyndsay Christie	Cefas & University of Bath
	297-P	The efficacy of commonly used disinfectants on lumpfish (*Cyclopterus lumpus*) embryos	Lyndsay Christie	Cefas & University of Bath
	298-P	Effect of two acidic antiseptics on hatching of common carp (*Cyprinus carpio*)	Karolina Naumowicz	University of Warmia and Mazury
	299-P	*In vitro* screening of 35 compounds against *Saprolegnia* spp.	Maria Letizia Fioravanti	Alma Mater Studiorum, University of Bologna
	300-P	Effective treatment of fish endoparasites with oral administration of drug delivery nanoparticles	Patrick Mathews Delgado	Department of Zoology, Institute of Biosciences, University of São Paulo
	301-P	Optimization of *Rhus verniciflua* stokes extract against edwardsiellosis and its pharmacokinetics in olive flounder	Jae-Woong Lim	Chonnam National University
	302-P	Screening of marine natural products (MNPS) as new antibacterial substances against fish pathogens affecting *Dicentrarchus labrax* and *Sparus aurata*	Marco Galeotti	University of Udine
	303-P	*In vitro* testing of disinfectants against nervous necrosis virus and *Tenacibaculum* spp.	Carlos P. Dopazo	Departamento de Microbiología y Parasitología. Instituto de Acuicultura, Universidade de Santiago de Compostela
	304-P	Efficacy and mechanisms of action of extract optimized from *Sanguisorba officinalis* L. roots against viral hemorrhagic septicemia in olive flounder	So Young Kang	Chonnam National University
	305-P	Mitochondrial and nuclear single nucleotide markers for detection of deltamethrin resistance in salmon lice	Claudia Tschesche	Institute of Aquaculture, University of Stirling
	306-P	Deltamethrin resistance in salmon lice: the carboxylesterase family	Claudia Tschesche	Institute of Aquaculture, University of Stirling

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Vaccinology	307-P	Immune response of tilapia (*Oreochromis niloticus*), injected with autovaccine and challenged with *Streptococcus agalactiae*, regulation of immune-related genes expression	Said Ben Hamed	Fisheries Institute
	308-P	Biomarkers of mucosal vaccination and challenge with *Flavobacterium psychrophilum* by proteomic profiling of skin mucus from rainbow trout (*Onchorynchus mykiss*)	Rowena Hoare	University of Stirling
	309-P	Evaluation of outer membrane vesicles as antigen delivery-platforms for fish	Claudia Serra	Centro Interdisciplinar de Investigação Marinha e Ambiental
	310-P	Transcriptomic analysis of the headkidney provides insights into the immune response to scuticociliate vaccination in *Paralichthys olivaceus*	Hyerim Yang	Jeju National University
	311-P	Development of yersiniosis vaccines for Atlantic salmon	Monica Gausdal Tingbø	Pharmaq
	312-P	Clinical documentation of a live attenuated vaccine against *Piscirickettsia salmonis*	Rolf Hetlelid Olsen	PHARMAQ part of Zoetis
	313-P	Protection induced by vaccines against vibriosis is affected by the phylogenetic diversity of *Vibrio anguillarum* serotype O2A	Niels Lorenzen	National Institute of Aquatic Resources, Technical University of Denmark
	314-P	Mucosal nanoparticle immunisation against salmon alphavirus (SAV) in Atlantic salmon (*Salmo salar* L.)	Sean Monaghan	Institute of Aquaculture, University of Stirling
Environmental and Toxicological Diseases	315-P	Environmental concentration of methamphetamine affects brown trout (*Salmo trutta m. fario*)	Maria Eugenia Sancho Santos	University of South Bohemia in České Budějovice
	316-P	Nephrocalcinosis in rainbow trout reared in recirculation aquaculture system – a case study	Ivana Papezikova	University of Veterinary and Pharmaceutical Sciences Brno
	317-P	Transgenerational impact of glyphosate on the behavior and biometric parameters of juvenile rainbow trout *Oncorhynchus mykiss*	Thierry Morin	French Agency for Food, Environmental and Occupational Health & Safety, Bretagne Loire University
	318-P	Variation in lipid content and fatty acid composition in baltic flounder as an indicator of the health status (preliminary results)	Agnieszka Góra	National Marine Fisheries Research Institute