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Posters

Innate Immunity in Vertebrates; Cytokines and Chemokines

1. Doušková D., Schwarzer M., Součková M., Španová A., Rittich B., Kozáková H.: Cytokine response of mice lymphocytes induced by *Bifidobacterium* strains is bacterial strain dependent
2. Suetake H., Tauchi H., Kikuchi K., Murayama T., Suzuki Y.: Fugu skin chemokine
3. Nepstad I., Øvergård A.-C., Nerland A.H., Patel S.: Cloning and characterization of interleukin-6 in Atlantic halibut (*Hippoglossus hippoglossus*)
4. Nakata M., Ito T., Sakai T.: Molecular characterization of inflammatory cytokines in peripheral blood mononuclear cells of the ferret (*Mustela putorius furo*)
5. Montero J., Chaves-Pozo E., Cuesta A., Tafalla C.: Chemokine transcription is differently modulated in rainbow trout (*Oncorhynchus mykiss*) infected with viral hemorrhagic septicemia virus (VHSV) and infectious pancreatic necrosis virus (IPNV)
6. Saito E., Nakamura O., Amanuma Y., Yamada H., Tsutsui S., Watanabe T.: Expression analysis of lymphocyte marker genes and cytokines in the ovary of viviparous teleost, *Neoditrema ransonnetii* (Perciformes. Embiotocidae)
7. Monte M., Zou J., Carrington A., Secombes C.: Expression analysis of IL-22 and bioactivity of its recombinant protein in rainbow trout (*Oncorhynchus mykiss*)
8. Rothwell L., Hu T., Kaiser P.: Biological characterisation of chicken interleukin-21
9. Corripio-Miyar Y., Zou J., Secombes C.J.: CXC chemokines in cod (*Gadus morhua*)
10. Guzmán F., Berendsen J., Cardenas C., Rojas M.V., Bethke J., Gallardo J., Mercado L.: Designed epitope sequences and peptide chemical synthesis for generating antibodies against salmon cytokines
11. Chaves-Pozo E., Montero J., Cuesta A., Tafalla C.: Chemokine profile in ovary upon infection with viral hemorrhagic septicaemia virus (VHSV) or infectious pancreatic necrosis virus (IPNV)

12. Espín R., Roca F.J., Falcó A., Meseguer J., Estepa A., Mulero V.: Fish TNF α increases the susceptibility of EPC and ZF4 cells to infection with spring viremia of carp virus
13. Eppler E., Oberlin D., Fellbaum C.: Insulin-like growth factor I (IGF-I) is expressed in the human lymph node and distinctly defined to subtypes of lymphocytes and antigen-presenting cells
14. Brusnyk C., Ross K., Xia J., Moon D., Magor K.E.: Chemokine receptor CCR7 and ligands CCL19 and CCL21 in the duck
15. Ingerslev H.C., Ossum C.G., Przybylska D., Jiménez N.V., Nielsen M.E.: PAMPs and DAMPs stimulate the expression of pro-inflammatory cytokines in vitro in fibroblasts from fish
16. Cuesta A., Wang T., Secombes C.J., Lorenzen N., Chaves-Pozo E., Tafalla C.: Use of rainbow trout interleukin 15 as an adjuvant for viral hemorrhagic septicemia virus (VHSV) DNA vaccination
17. Araki K., Takizawa F., Yamasaki M., Esumi M., Konishi M., Yamamoto A., Moritomo T., Ototake M., Nakanishi T.: Role of interferon-gamma and perforin on the cell-mediated immunity in fish
18. Berendsen J., Rojas M.V., Cardenas C., Guzmán F., Bethke J., Gallardo J., Mercado L.: Immunological approaches for pro-inflammatory (IL-6 and TNF α) quantification in salmonids
19. Harun N.O., Wang T., Secombes C.J.: Expression profiling of key cytokines in vaccinated rainbow trout after *Yersinia ruckeri* challenge

T- and B-Cell Receptors and Function

20. Dijkstra H.: Evolution of genes related to CD4
21. Zelená K., Šinkora M.: Peripheral $\alpha\beta$ T cells in swine differ in expression of CD25, CD11B, SWC1, CD45R and CD45RA according to their tissue location
22. Kumari J., Bogwald J., Dalmo R.A.: Transcription factor T-bet in Atlantic salmon: Identification, molecular characterization, promoter and expression analysis
23. Sadlonova A., Herrin B.R., Alder M.N., Benjamin Jr. W.H., Briles D.E., Cooper M.D.: The role of variable lymphocyte receptors in protective immunity of lampreys
24. Yamaguchi T., Katakura F., Yoshida M., Ohtani M., Moritomo T., Nakanishi T.: Long-term proliferation of common carp (*Cyprinus carpio*) CD4⁺ T-cells in culture
25. Odakal T., Tsutsui S., Miyadai T., Sugamata R., Suetake H., Suzuki Y., Nakamura O.: Novel IgM⁺CD8⁺ double positive cells in the pufferfish, *Takifugu rubripes*
26. Uenishi H., Eguchi-Ogawa T., Tanaka-Matsuda M., Morozumi T., Toki D., Shinkai H., Yamamoto R., Takagaki Y., Ando A., Rogel-Gaillard C., Chardon P.: Diversity of T cell receptors and antigen presenting molecules in pigs

27. Øvergård A.-C., Nerland A.H., Patel S.: Relative expression of a P56LCK homologue in Atlantic halibut (*Hippoglossus hippoglossus*)
28. Ramsey J.P., Reinert L.K., Brucker R.M., Rollins-Smith L.A.: The lethal chytrid fungus, *Batrachochytrium dendrobatidis*, can paralyze amphibian T cell defenses

Immunoglobulin Superfamily and its Evolution

29. Pomorska-Mól M., Markowska-Daniel I.: Dynamic changes of IgA, IgM and IgG concentrations in pigs colostrum and serum around parturition
30. Lentz V.M., Schwarz C.: Preliminary characterization of largemouth bass (*Micropterus salmoides*) immunoglobulin
31. Wang X., Olp J.J., Mitchell K.R., and Miller R.D.: Content, organization, and expression of immunoglobulin genes in *Monodelphis domestica*
32. Lin H.-Y., Wang Y.-J., Chen Y.-M., Wang H.-C., Chen T.-Y., Yang H.-L.: Cloning recombination activating gene 1 and 2 (*rag1* and *rag2*) and analyzing of the genes expression in adaptive immunity ontogenesis of orange-spotted grouper
33. Kothapalli N., Norton D.D., Fugmann S.D.: Identification of cis-regulatory elements targeting aid-mediated sequence diversification to the chicken immunoglobulin light chain gene

MHC

34. Oren M., Paz G., Douek J., Rosner A., Fishelson Z., Rinkevich B.: Disparate transcriptom profiles of innate immune effector arms during urochordate allogeneic interactions
35. Urabe S., Somamoto T., Sameshima S., Nakanishi T., Ototake M., Nakao M.: Characterization of MHC class I genes in clonal ginbuna crucian carp, *Carassius auratus langsdorfii*
36. Gómez D., Conejeros P., Marshall S.: MHC class II polymorphism in aquacultured *Oncorhynchus kisutch*
37. Nonaka M.I., Nonaka M.: Evolutionary analysis of two classical MHC class I loci of a teleost medaka (*Oryzias latipes*): Haplotype-specific genomic diversity, polymorphisms of ancient origin, and interlocus homogenization

Invertebrate Immunity

38. Franchi N., Ballarin L., Piccinni E.: Individuation of a new metallothionein from the urochordate *Ciona entestinalis*
39. Cueto J.A., Fader C., Ortega H.H., Castro-Vazquez A.: *In vitro* and *in vivo* responses of circulating hemocytes in the apple snail *Pomacea canaliculata* (Architaenioglossa, Ampullariidae)
40. Boidin Wichlacz C., Hot V.C., Salzet M., Tasiemski A.: Function of the leech blood cells in neural immunity and neural repair

41. Bosch T.C.G., Augustin R. *et al.*: Uncovering the evolutionary history of innate immunity: the simple metazoan *Hydra* uses epithelial cells for host defence
42. Burešová V., Hajdušek O., Kopáček P.: Functional screening of molecules involved in pathogen phagocytosis by tick hemocytes
43. Chrudimská T., Dorňáková V., Rudenko N., Golovchenko M., Grubhoffer L.: Tick antimicrobial peptides: defensins and ricinisin
44. Cima F., Franchi N., Ballarin L.: An exceptional immunosurveillance system of the pharynx entry in a protochordate
45. Menzel L.P., Bigger C.H.: Initial characterization of an agglutinin from *Swiftia exserta*, a gorgonian octocoral
46. Tarr D.E.K.: Preliminary analysis of nematode antimicrobial peptide diversity
47. Lin Y.-C., Hu W.-T., Huang C.-L., Chen J.C.: Identification and function of α 2-macroglobulin and ITS implication in the innate immune defense of arthropod

Shellfish Immunity

48. Wu C., Söderhäll I., Kim Y.-A., Liu H., Söderhäll K.: Hemocyte lineage marker proteins in a crustacean, the freshwater crayfish *Pacifastacus leniusculus*
49. Mekata T., Okugawa S., Kono T., Sakai M., Itami T.: Characterization of anti-lipopolysaccharide factors, MjALF/ALF2, in kuruma shrimp *Marsupenaeus japonicus*
50. Kono T., Sonoda K., Mekata T., Itami T., Sakai M.: Antimicrobialpeptide genes expression in kuruma shrimp, *Marusupenaeus japonicus* treated with DNA vaccine against white spot disease virus
51. Sakai M., Shibata Y., Kono T., Mekata T., Itami T.: The immunogenic effects of CpG oligodeoxynucleotides treatment in kuruma shrimp *Marsupenaeus japonicus*
52. Lin Z., Solís-Román C., Kim J., Fernández-Robledo J.A., Vasta G.R.: The natural resistance-associated macrophage protein as a potential dermo disease-resistance marder in the eastern oyster *Crassostrea virginica*
53. Moya J., Morales N., Arenas G., Mercado L.: Seasonal viability and phagocytic activity from hyaline hemocytes of *Choromytilus chorus* (Molina, 1782)
54. Hoppes J.L., Hauton C., Hawkins L.E.: Development of an *in vitro* technique to assess the effects of the dinoflagellate parasite *Hematodinium* sp. on the immune function of the edible crab, *Cancer pagurus*
55. Roulston C., Smith V.J.: Two-step cell separation of crab haemocytes and analysis by flow cytometry
56. Robb C.T., Rossi A.G., Smith V.J., Dyrinda E.A.: Demonstration of apoptosis in hyaline and granular haemocytes of the shore crab, *Carcinus maenas*
57. Cerenius L., Liu H., Zhang Y., Tassankajon A., Rimphanitchayakit V., Andersson M.G., Söderhäll I., Söderhäll K.: High sequence variability among Kazal-type proteinase inhibitors in decapod crustacean hemocytes

58. Fagutao F.F., Koyama T., Kaizu A., Kondo H., Aoki T., Hirono I.: Absence of prophenoloxidase causes increase in bacterial load in shrimp haemolymph.
59. Dios S., Costa M.M., Alonso-Gutierrez J., Romero A., Novoa B., Figueras A.: Evidence of high individual diversity on myticin C in mussel (*Mytilus galloprovincialis*)
60. Varotto L., Bernante F., Rosani U., Pallavicini A., Lanfranchi G., Venier P.: Advancements in the functional genomics of *Mytilus galloprovincialis*
61. Vatanavicharn T., Supungul P., Tassanakajon A.: Genomic structure, expression pattern and functional characterization of crustinPm5 from *Penaeus monodon*
62. Donpudsa S., Supungul P., Tassanakajon A., Rimphanitchayakit V.: Genomic organization, tissue distribution and bacteriostatic activity of the five-domain Kazal-type serine proteinase inhibitor from the black tiger shrimp *Penaeus monodon*

Pattern Recognition Molecules and Immune Sensors of Pathogens

63. Buckley K.M., Munshaw S., Kepler T.B., Smith L.C.: The immune-response gene family 185/333 from the purple sea urchin undergoes rapid diversification via recombination
64. Štěrba J., Dupejová J., Fišer M., Golovchenko M., Rudenko N., Grubhoffer L.: Detection and partial characterisation of several lectins/FReD proteins in hard-ticks
65. Chen N.-Y., Lai Y.-S., Chuang H.-C., Ruan Y.-H., Lin Y.-S., Ji T.-L., Chiou P.P.: Molecular cloning and characterization of toll-like receptor 3 in orange-spotted grouper (*Epinephelus coioides*)
66. Skjæveland I., Iliev D.B., Jørgensen J.B.: Toll like receptors 8 and 9 are up-regulated by interferon in Atlantic salmon
67. Gonçalves A.F., Rodrigues P., Coimbra J., Wilson J.M.: Effects of ammonia on bacterial lipopolysaccharide induction off the innate immune response in larval zebrafish
68. Tasumi S., Fernández-Robledo J.A., Costa-Bowles P., Vasta G.R.: Cloning and characterization of a second galectin (CVGAL2) from the eastern oyster (*Crassostrea virginica*)

Immune Effector Molecules

69. Szabó M., Bartis D., Kvell K., Czömpöly T., Talabér G., Németh P., Berki T., Boldizsár F.: Various tyrosine-residue point mutations of the ZAP-70 kinase affect calcium signaling upon activation in Jurkat human T cell line
70. Katakura F., Yoshida M., Yamaguchi T., Moritomo T., Nakanishi T.: Development of the single-cell colony-forming assay system: characterization of common carp (*Cyprinus carpio*) kidney hematopoietic progenitor cells
71. Chen Y.-M., Kuo C.-E., Shie P.-S., Wang T.-Y., Wang W.-C., Tsai T.-J., Chen T.-Y.: Molecular cloning and functional analysis of orange-spotted grouper

- (*Epinephelus coioides*) heat shock protein 90 α (HSP90 α) associate with nervous necrosis virus replication
72. Zhang J., Xiao X., Chen X., Ao J.: Molecular and functional characterization of caspase-9 gene in large yellow croaker (*Pseudosciaena crocea*)
 73. Šplíchal I., Šplíchalová A., Trebichavský I., Rada V.: Contrary to bifidobacteria *E. coli* Nissle 1917 protects gnotobiotic piglets against virulent O55 strain of *E. coli*
 74. Kong H.J., Nam B.H., Kim Y., Kim W.J., Do J.W., Lee S.J., Kim K.K.: An immune-responsive factor D/adipsin and kallikreine-like serine protease from the olive flounder *Paralichthys olivaceus*
 75. Teles M., Boltaña S., Mackenzie S., Tort L.: Combined effects of copper and LPS on cytokines gene expression in rainbow trout macrophages
 76. Shved N., Berishvili G., Häusermann E., D’Cotta H., Baroiller J.-F., Eppler E.: Challenge with 17 α -ethinylestradiol (EE2) during early development leads to persistent impairment of growth, differentiation, and local expression of IGF-I and IGF-II in immune organs of the Nile tilapia (*Oreochromis niloticus*).
 77. Shewring D., Zou J., Corripio-Miyar Y., Secombes C.: Gadoid antimicrobial peptides: sequencing, characterization and expression analysis
 78. Korytar T., Verleih M., Rebl A., Anders E., Köllner B., Goldammer T.: Investigation of genomic, transcriptomic and functional differences in the immune system of two different resistant rainbow trout strains – the DIREFO project
 79. Khamassi A., Ouertani L., Mohamed M., Aouani E., Ben-Attia M.: Comparative analysis of the thymus: use of two models vertebrate
 80. Khamassi A., Mohamed M., Khazri O., Charradi K., Aouani E., Ben-Attia M.: Oxidative stress in fish and mice: correlation between rise in temperature and age as indexes of immune response

Innate Immune Cells, Apoptosis, Growth Factors

81. Narvaez E., Berendsen J., Palacios C., Guzmán F., Arenas G., Gallardo J., Mercado L.: An immunologicval method for quantifying antimicrobial activity in *Salmo salar* (Linnaeus, 1758) tissue samples
82. Parra D., Li J., Sunyer J.O.: Phagocytic B lymphocytes in mouse
83. Hikima J., Cha I.-S., Jang H.-B., Park S.-B., Nho S.-W., Kim Y.-R., Jung T.-S., Aoki T.: Proteomic database of membrane proteins in the peripheral blood leukocytes of fugu (*Takifugu rubripes*)
84. Holland J.W., Okamura B., Hartikainen H., Longshaw M., Feist S., Secombes C.J.: The utility of expression library immunization (ELI) to identify protective antigens from *Tetracapsuloides bryosalmonae*, the causative agent of proliferative kidney disease in salmonids
85. Araújo L., Cunha M., Afonso A.: Senegalense sole (*Solea senegalensis*) serum and cell inflammatory response after intraperitoneal infection with *Tenacibaculum maritimum*

86. Hur D., Hongt S.: Cloning and expression study of gelsolin gene in olive flounder, *Paralichthys olivaceus*

Complement and Complement-Like Factors

87. Lian Z., Rothwell L., Hu T., Clayton D., Chen C., Russell P., Kaiser P.: The type I IFN complement of the chicken

Immunomodulation and Prophylactic Strategies, Vaccines

88. Abelli L., Bertoni F., Marchetti M.G., Zeni C., Romano N., Tiscar P.G., Volpatti D., Bulfon C., Galeotti M.: Experimental vaccine trial against vibriosis in *Dicentrarchus labrax* (L.)
89. Mo Z.L., Zhang Z.F.: Molecular characterization of the *Edwardsiella tarda* *aroA* gene and evaluation of an auxotrophic *aroA* mutant as a live attenuated vaccine
90. Barrioluengo L., Fierro-Castro C., López-Fierro P., Razquin B.E., Villena A.J.: Characterisation of the immune gene expression profile in rainbow trout after vaccination with a live attenuated *aroA* vaccine of *Aeromonas hydrophila*
91. Reyes-Becerril M., Cerezuela R., Ascencio F., Meseguer J., Esteban Abad M. A.: Gilthead seabream (*Sparus aurata* L.) immune response after dietary administration of two candidate aquaculture probiotics: lemon and marine live yeast
92. Caipang C.M.A., Lazado C.C., Brinchmann M.F., Kiron V.: Modulation of immune response in Atlantic cod, *Gadus morhua* following oral administration of antimicrobials
93. Cerezuela R., Meseguer J., Esteban M.A.: The effect of dietary inulin on intestinal mucosal architecture in gilthead seabream (*Sparus aurata* L.)
94. Fierro-Castro C., Barrioluengo L., Carracedo B., López-Fierro P., Razquin B.E., Villena A.J.: Fish cell cultures as *in vitro* models of pro-inflammatory responses elicited by immunostimulants

Anti-Viral Immunity

95. Hansen T., Skjesol A., Jørgensen J.B.: IPNV may use multiple strategies to avoid antiviral host responses
96. Casadei E., Wang T., Zou J., González Vecino J.L., Secombes C.J.: Expression and characterization of three novel α -defensin antimicrobial peptides in rainbow trout (*Oncorhynchus mykiss*)
97. Cuesta A., Chaves-Pozo E., Tafalla C.: Differential regulation of NKEF, perforin and granzyme genes as indicators of cytotoxic cell activity after viral DNA vaccination and viral infections in fish
98. Ramsell J., Hauge H., Mjaaland S.: Characterization of viral and host factors affecting infectious salmon anemia virus (ISAV) virulence
99. Zou J., Chang M., Nie P., Collet B., Secombes C.: Origin and evolution of the antiviral RNA helicase gene family

Parasite-Vector Interactions / Parasite Immunity

100. Huňová K., Vostrý M., Houžvičková L., Mikeš L., Horák P.: *Radix lagotis* as a new model organism to study host-trematode interactions

Ecoimmunity

101. Girón-Pérez M.I., Rodríguez-Aranda M.E., Peña-Mesina E., Medina-Díaz I.M., Velázquez-Fernández J.B., Rojas-García A.E., Robledo-Marengo M.L.: Microbicidal activity of hemocytes of oyster *Crassostrea cortiziensis* from an estuarine area of the Mexican Pacific.
102. Girón-Pérez M.I., Diaz-Salas F., Diaz-Resendiz K., Medina-Díaz I.M., Velázquez-Fernández J.B., Rojas-García A.E., Robledo-Marengo M.L., Casas-Solis J., Zaitseva G., Santerre A.: Immunological parameters evaluation in Nile tilapia (*Oreochromis niloticus*) exposed to organophosphorus pesticide diazinon
103. Plytycz B., Mika J., Bigaj J.: Ecoimmunity: Efficiency of lymphoid system and longevity of the yellow-bellied toad (*Bombina variegata*) field populations
104. Plytycz B., Lis-Molenda U., Cygal M., Kielbasa M., Grebosz A., Duchnowski M., Andre J., Morgan A.J.: Ecoimmunity: Riboflavin content of coelomocytes in the earthworm (*Dendrodrilus rubidus*) field populations as a molecular biomarker of soil metal pollution
105. Dvořák J., Mančíková V., Šilerová M., Procházková P., Josková R., Ellhotová D., Němcová A., Pižl V., Bilej M.: Does microbial environment determine innate immunity in earthworms?
106. Kim Y., Park E.M., Nam B.H., Kong H.J., Kim W.J., Lee S.J., Kim K.K.: Identification and characterization of hzpxia inducible gene YGHL1 from olive flounder, *Paralichthys olivaceus*
107. Brett C.M., Smith V.J.: Gene fishing for immune-related sequences from the marine copepod, *Calanus finmarchicus*
108. Brett C.M., Smith V.J.: Sequencing and characterization of immune-related genes from the marine copepod, *Calanus finmarchicus*
109. Brinchmann M.F., Gallage S., Caipang C.M.A., Kiron V.: Modulation of Atlantic cod (*Gadus morhua*) head kidney leukocyte phagocytosis by temperature, osmolarity and heavy metals
110. Carland T.M., Gerwick L.: Measurements of the relative health of California halibut in the bay of San Diego
111. Ramsey J.P., Woodhams D.C., Reinert L.K., Curtiss A., Rollins-Smith L.A.: Immune defenses of *Xenopus laevis* against a fungus linked to global amphibian declines
112. Costas B., Conceição L., Aragão C., Martos J.A., Ruiz-Jarabo I., Mancera J.M., Afonso A.: Innate immune cells of Senegalese sole (*Solea senegalensis* Kaup 1858): Effects of handling stress on respiratory burst activity

