

# R D Houston

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8045222/publications.pdf>

Version: 2024-02-01

86  
papers

5,380  
citations

87723

38  
h-index

95083

68  
g-index

96  
all docs

96  
docs citations

96  
times ranked

3113  
citing authors

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 1  | Harnessing genomics to fast-track genetic improvement in aquaculture. <i>Nature Reviews Genetics</i> , 2020, 21, 389-409.  | 7.7 | 286       |
| 2  | Major Quantitative Trait Loci Affect Resistance to Infectious Pancreatic Necrosis in Atlantic Salmon ( <i>Salmo salar</i> ). <i>Genetics</i> , 2008, 178, 1109-1115.   | 1.2 | 262       |
| 3  | Development and validation of a high density SNP genotyping array for Atlantic salmon ( <i>Salmo salar</i> ). <i>BMC Genomics</i> , 2014, 15, 90.  | 1.2 | 219       |
| 4  | Applications of genotyping by sequencing in aquaculture breeding and genetics. <i>Reviews in Aquaculture</i> , 2018, 10, 670-682.  | 4.6 | 217       |
| 5  | Genome wide association and genomic prediction for growth traits in juvenile farmed Atlantic salmon using a high density SNP array. <i>BMC Genomics</i> , 2015, 16, 969.                                     | 1.2 | 211       |
| 6  | Genomic prediction of host resistance to sea lice in farmed Atlantic salmon populations. <i>Genetics Selection Evolution</i> , 2016, 48, 47.   | 1.2 | 203       |
| 7  | Linkage maps of the Atlantic salmon ( <i>Salmo salar</i> ) genome derived from RAD sequencing. <i>BMC Genomics</i> , 2014, 15, 166.  | 1.2 | 151       |
| 8  | Genome-Wide Association and Genomic Selection for Resistance to Amoebic Gill Disease in Atlantic Salmon. <i>G3: Genes, Genomes, Genetics</i> , 2018, 8, 1195-1203.   | 0.8 | 142       |
| 9  | The susceptibility of Atlantic salmon fry to freshwater infectious pancreatic necrosis is largely explained by a major QTL. <i>Heredity</i> , 2010, 105, 318-327.  | 1.2 | 139       |
| 10 | Genomic Prediction of Resistance to Pasteurellosis in Gilthead Sea Bream ( <i>Sparus aurata</i> ) Using 2b-RAD Sequencing. <i>G3: Genes, Genomes, Genetics</i> , 2016, 6, 3693-3700.                         | 0.8 | 129       |
| 11 | Potential of Genome Editing to Improve Aquaculture Breeding and Production. <i>Trends in Genetics</i> , 2019, 35, 672-684.   | 2.9 | 125       |
| 12 | Characterisation of QTL-linked and genome-wide restriction site-associated DNA (RAD) markers in farmed Atlantic salmon. <i>BMC Genomics</i> , 2012, 13, 244.   | 1.2 | 120       |
| 13 | Genetics and genomics of disease resistance in salmonid species. <i>Frontiers in Genetics</i> , 2014, 5, 415.  | 1.1 | 120       |
| 14 | Potential of genotyping-by-sequencing for genomic selection in livestock populations. <i>Genetics Selection Evolution</i> , 2015, 47, 12.  | 1.2 | 107       |
| 15 | Genomic Selection for Growth Traits in Pacific Oyster ( <i>Crassostrea gigas</i> ): Potential of Low-Density Marker Panels for Breeding Value Prediction. <i>Frontiers in Genetics</i> , 2018, 9, 391.       | 1.1 | 105       |
| 16 | Future directions in breeding for disease resistance in aquaculture species. <i>Revista Brasileira De Zootecnia</i> , 2017, 46, 545-551.   | 0.3 | 104       |
| 17 | Functional Annotation of All Salmonid Genomes (FAASG): an international initiative supporting future salmonid research, conservation and aquaculture. <i>BMC Genomics</i> , 2017, 18, 484.                   | 1.2 | 99        |
| 18 | Development of a Medium Density Combined-Species SNP Array for Pacific and European Oysters ( <i>Crassostrea gigas</i> and <i>Ostrea edulis</i> ). <i>G3: Genes, Genomes, Genetics</i> , 2017, 7, 2209-2218. | 0.8 | 97        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 19 | Genotype Imputation To Improve the Cost-Efficiency of Genomic Selection in Farmed Atlantic Salmon. <i>G3: Genes, Genomes, Genetics</i> , 2017, 7, 1377-1383.  | 0.8 | 93        |
| 20 | A chromosome-level genome assembly for the Pacific oyster <i>Crassostrea gigas</i> . <i>GigaScience</i> , 2021, 10, .   | 3.3 | 88        |
| 21 | Genome-wide association and genomic prediction of resistance to viral nervous necrosis in European sea bass ( <i>Dicentrarchus labrax</i> ) using RAD sequencing. <i>Genetics Selection Evolution</i> , 2018, 50, 30. | 1.2 | 87        |
| 22 | Accuracy of Genomic Evaluations of Juvenile Growth Rate in Common Carp ( <i>Cyprinus carpio</i> ) Using Genotyping by Sequencing. <i>Frontiers in Genetics</i> , 2018, 9, 82.   | 1.1 | 85        |
| 23 | Genomics in aquaculture to better understand species biology and accelerate genetic progress. <i>Frontiers in Genetics</i> , 2015, 6, 128.  | 1.1 | 82        |
| 24 | Amelanocortin-4 receptor(MC4R) polymorphism is associated with performance traits in divergently selected large white pig populations. <i>Animal Genetics</i> , 2004, 35, 386-390.                                    | 0.6 | 79        |
| 25 | Gene expression comparison of resistant and susceptible Atlantic salmon fry challenged with Infectious Pancreatic Necrosis virus reveals a marked contrast in immune response. <i>BMC Genomics</i> , 2016, 17, 279.   | 1.2 | 78        |
| 26 | The genetic architecture of growth and fillet traits in farmed Atlantic salmon ( <i>Salmo salar</i> ). <i>BMC Genetics</i> , 2015, 16, 51.  | 2.7 | 77        |
| 27 | Mapping and validation of a major QTL affecting resistance to pancreas disease (salmonid alphavirus) in Atlantic salmon ( <i>Salmo salar</i> ). <i>Heredity</i> , 2015, 115, 405-414.                                 | 1.2 | 77        |
| 28 | Atlantic salmon ( <i>Salmo salar</i> L.) genetics in the 21st century: taking leaps forward in aquaculture and biological understanding. <i>Animal Genetics</i> , 2019, 50, 3-14.                                     | 0.6 | 66        |
| 29 | A Genome-Wide Association Study for Host Resistance to Ostreid Herpesvirus in Pacific Oysters ( <i>Crassostrea gigas</i> ). <i>G3: Genes, Genomes, Genetics</i> , 2018, 8, 1273-1280.                                 | 0.8 | 63        |
| 30 | Optimizing Low-Cost Genotyping and Imputation Strategies for Genomic Selection in Atlantic Salmon. <i>G3: Genes, Genomes, Genetics</i> , 2020, 10, 581-590.   | 0.8 | 61        |
| 31 | Genomic Prediction Using Low Density Marker Panels in Aquaculture: Performance Across Species, Traits, and Genotyping Platforms. <i>Frontiers in Genetics</i> , 2020, 11, 124.  | 1.1 | 61        |
| 32 | Discovery and Functional Annotation of Quantitative Trait Loci Affecting Resistance to Sea Lice in Atlantic Salmon. <i>Frontiers in Genetics</i> , 2019, 10, 56.  | 1.1 | 59        |
| 33 | Accuracy of genotype imputation and genomic predictions in a two-generation farmed Atlantic salmon population using high-density and low-density SNP panels. <i>Aquaculture</i> , 2018, 491, 147-154.                 | 1.7 | 56        |
| 34 | Gene Expression Response to Sea Lice in Atlantic Salmon Skin: RNA Sequencing Comparison Between Resistant and Susceptible Animals. <i>Frontiers in Genetics</i> , 2018, 9, 287.                                       | 1.1 | 50        |
| 35 | Optimizing Genomic Prediction of Host Resistance to Koi Herpesvirus Disease in Carp. <i>Frontiers in Genetics</i> , 2019, 10, 543.  | 1.1 | 48        |
| 36 | Genetic differences in host infectivity affect disease spread and survival in epidemics. <i>Scientific Reports</i> , 2019, 9, 4924.   | 1.6 | 48        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 37 | Single nucleotide polymorphisms in the <i>insulin-like growth factor 1</i> ( <i>IGF1</i> ) gene are associated with growth-related traits in farmed Atlantic salmon. <i>Animal Genetics</i> , 2014, 45, 709-715.                                | 0.6 | 46        |
| 38 | QTL affecting morphometric traits and stress response in the gilthead seabream ( <i>Sparus aurata</i> ). <i>Aquaculture</i> , 2011, 319, 58-66.   | 1.7 | 42        |
| 39 | Potential of genomic selection for improvement of resistance to ostreid herpesvirus in Pacific oyster ( <i>Crassostrea gigas</i> ). <i>Animal Genetics</i> , 2020, 51, 249-257.   | 0.6 | 41        |
| 40 | Construction and Annotation of a High Density SNP Linkage Map of the Atlantic Salmon ( <i>Salmo</i> )   | 0.8 | 40        |
| 41 | High-resolution mapping of the recombination landscape of the phytopathogen <i>Fusarium graminearum</i> suggests two-speed genome evolution. <i>Molecular Plant Pathology</i> , 2018, 19, 341-354.  | 2.0 | 40        |
| 42 | Detailed insights into pan-European population structure and inbreeding in wild and hatchery Pacific oysters ( <i>Crassostrea gigas</i> ) revealed by genome-wide SNP data. <i>Evolutionary Applications</i> , 2019, 12, 519-534.               | 1.5 | 39        |
| 43 | Efficient CRISPR/Cas9 genome editing in a salmonid fish cell line using a lentivirus delivery system. <i>BMC Biotechnology</i> , 2020, 20, 35.  | 1.7 | 39        |
| 44 | Genomics Toolbox for Farmed Fish. <i>Reviews in Fisheries Science</i> , 2008, 16, 3-15.   | 2.1 | 38        |
| 45 | Mapping and Sequencing of a Significant Quantitative Trait Locus Affecting Resistance to Koi Herpesvirus in Common Carp. <i>G3: Genes, Genomes, Genetics</i> , 2018, 8, 3507-3513.  | 0.8 | 38        |
| 46 | Current status and potential of genomic selection to improve selective breeding in the main aquaculture species of International Council for the Exploration of the Sea (ICES) member countries. <i>Aquaculture Reports</i> , 2021, 20, 100700. | 0.7 | 37        |
| 47 | Verification of SNPs Associated with Growth Traits in Two Populations of Farmed Atlantic Salmon. <i>International Journal of Molecular Sciences</i> , 2016, 17, 5.  | 1.8 | 36        |
| 48 | Genetic parameters for resistance to Tilapia Lake Virus (TiLV) in Nile tilapia ( <i>Oreochromis niloticus</i> ). <i>Aquaculture</i> , 2020, 522, 735126.  | 1.7 | 36        |
| 49 | Segregation of infectious pancreatic necrosis resistance QTL in the early life cycle of Atlantic Salmon ( <i>Salmo salar</i> ). <i>Animal Genetics</i> , 2010, 41, 531-536.   | 0.6 | 34        |
| 50 | Detection of QTL affecting harvest traits in a commercial Atlantic salmon population. <i>Animal Genetics</i> , 2009, 40, 753-755.   | 0.6 | 32        |
| 51 | A QTL affecting daily feed intake maps to Chromosome 2 in pigs. <i>Mammalian Genome</i> , 2005, 16, 464-470.  | 1.0 | 31        |
| 52 | Balancing selection at a premature stop mutation in the myostatin gene underlies a recessive leg weakness syndrome in pigs. <i>PLoS Genetics</i> , 2019, 15, e1007759.  | 1.5 | 31        |
| 53 | Population Structure and Genetic Diversity of Nile Tilapia ( <i>Oreochromis niloticus</i> ) Strains Cultured in Tanzania. <i>Frontiers in Genetics</i> , 2019, 10, 1269.  | 1.1 | 31        |
| 54 | Development and Validation of an Open Access SNP Array for Nile Tilapia ( <i>Oreochromis</i> )  | 0.8 | 31        |

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 55 | Genetic improvement technologies to support the sustainable growth of UK aquaculture. <i>Reviews in Aquaculture</i> , 2021, 13, 1958-1985.   | 4.6 | 31        |
| 56 | Development and testing of a combined species SNP array for the European seabass ( <i>Dicentrarchus labrax</i> ). <i>Overlook 10</i> 10.1007/s10046-021-00000-0  | 1.3 | 31        |
| 57 | Exploring the utility of cross-laboratory RAD-sequencing datasets for phylogenetic analysis. <i>BMC Research Notes</i> , 2015, 8, 299.   | 0.6 | 29        |
| 58 | A major quantitative trait locus affecting resistance to Tilapia lake virus in farmed Nile tilapia ( <i>Oreochromis niloticus</i> ). <i>Heredity</i> , 2021, 127, 334-343.   | 1.2 | 29        |
| 59 | Detection and Confirmation of a Major QTL Affecting Resistance to Infectious Pancreatic Necrosis (IPN) in Atlantic Salmon ( <i>Salmo Salar</i> ). <i>Developments in Biologicals</i> , 2008, 132, 199-204.   | 0.4 | 29        |
| 60 | Sequencing and Characterisation of an Extensive Atlantic Salmon ( <i>Salmo salar</i> L.) MicroRNA Repertoire. <i>PLoS ONE</i> , 2013, 8, e70136.   | 1.1 | 29        |
| 61 | miRNAs Predicted to Regulate Host Anti-viral Gene Pathways in IPNV-Challenged Atlantic Salmon Fry Are Affected by Viral Load, and Associated With the Major IPN Resistance QTL Genotypes in Late Infection. <i>Frontiers in Immunology</i> , 2020, 11, 2113. | 2.2 | 28        |
| 62 | Optimizing hatchery practices for genetic improvement of marine bivalves. <i>Reviews in Aquaculture</i> , 2021, 13, 2289-2304.   | 4.6 | 28        |
| 63 | Surrogate broodstock to enhance biotechnology research and applications in aquaculture. <i>Biotechnology Advances</i> , 2021, 49, 107756.  | 6.0 | 28        |
| 64 | A SNP in the 5' flanking region of the myostatin-1b gene is associated with harvest traits in Atlantic salmon ( <i>Salmo salar</i> ). <i>BMC Genetics</i> , 2013, 14, 112.   | 2.7 | 27        |
| 65 | Maternal inheritance of deltamethrin resistance in the salmon louse <i>Lepeophtheirus salmonis</i> (Krøyer) is associated with unique mtDNA haplotypes. <i>PLoS ONE</i> , 2017, 12, e0180625.  | 1.1 | 27        |
| 66 | SNP markers for the genetic characterization of Mexican shrimp broodstocks. <i>Genomics</i> , 2018, 110, 423-429.  | 1.3 | 26        |
| 67 | Characterising the mechanisms underlying genetic resistance to amoebic gill disease in Atlantic salmon using RNA sequencing. <i>BMC Genomics</i> , 2020, 21, 271.  | 1.2 | 23        |
| 68 | The nedd-8 activating enzyme gene underlies genetic resistance to infectious pancreatic necrosis virus in Atlantic salmon. <i>Genomics</i> , 2021, 113, 3842-3850.   | 1.3 | 22        |
| 69 | A Polymorphism in the 5'-Untranslated Region of the Porcine Cholecystokinin Type A Receptor Gene Affects Feed Intake and Growth. <i>Genetics</i> , 2006, 174, 1555-1563.   | 1.2 | 21        |
| 70 | Potential of genomic technologies to improve disease resistance in molluscan aquaculture. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2021, 376, 20200168.   | 1.8 | 18        |
| 71 | Quantitative trait loci and genes associated with salmonid alphavirus load in Atlantic salmon: implications for pancreas disease resistance and tolerance. <i>Scientific Reports</i> , 2020, 10, 10393.  | 1.6 | 17        |
| 72 | Characterizing the genetic structure of introduced Nile tilapia ( <i>Oreochromis niloticus</i> ) strains in Tanzania using double digest RAD sequencing. <i>Aquaculture International</i> , 2020, 28, 477-492.   | 1.1 | 16        |

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 73 | Characterization of OAR1 and OAR18 QTL associated with muscle depth in British commercial terminal sire sheep. <i>Animal Genetics</i> , 2011, 42, 172-180.   | 0.6 | 15        |
| 74 | Efficient Genome Editing in Multiple Salmonid Cell Lines Using Ribonucleoprotein Complexes. <i>Marine Biotechnology</i> , 2020, 22, 717-724.   | 1.1 | 15        |
| 75 | Changed Patterns of Genomic Variation Following Recent Domestication: Selection Sweeps in Farmed Atlantic Salmon. <i>Frontiers in Genetics</i> , 2020, 11, 264.  | 1.1 | 15        |
| 76 | Investigating mechanisms underlying genetic resistance to Salmon Rickettsial Syndrome in Atlantic salmon using RNA sequencing. <i>BMC Genomics</i> , 2021, 22, 156.  | 1.2 | 15        |
| 77 | Assessing the genetic diversity of farmed and wild Rufiji tilapia ( <i>Oreochromis urolepis</i> ) Tj ETQq1 1 0.784314 rgBT /Overlock, 10 Tf 50   | 0.8 | 12        |
| 78 | Developments in marine invertebrate primary culture reveal novel cell morphologies in the model bivalve <i>Crassostrea gigas</i> . <i>PeerJ</i> , 2020, 8, e9180.  | 0.9 | 12        |
| 79 | The impact of genetic relationship between training and validation populations on genomic prediction accuracy in Atlantic salmon. <i>Aquaculture Reports</i> , 2022, 23, 101033.                             | 0.7 | 12        |
| 80 | Exploring genetic resistance to infectious salmon anaemia virus in Atlantic salmon by genome-wide association and RNA sequencing. <i>BMC Genomics</i> , 2021, 22, 345.                                       | 1.2 | 11        |
| 81 | The cholecystokinin type A receptor g.179A>G polymorphism affects feeding rate. <i>Animal Genetics</i> , 2008, 39, 187-188.  | 0.6 | 10        |
| 82 | Assessment of genetic diversity and population structure in cultured Australian Pacific oysters. <i>Animal Genetics</i> , 2019, 50, 686-694.   | 0.6 | 9         |
| 83 | Novel insights into the genetic relationship between growth and disease resistance in an aquaculture strain of Coho salmon ( <i>Oncorhynchus kisutch</i> ). <i>Aquaculture</i> , 2019, 511, 734207.          | 1.7 | 9         |
| 84 | Transcriptome Profiling of Pacu ( <i>Piaractus mesopotamicus</i> ) Challenged With Pathogenic <i>Aeromonas hydrophila</i> : Inference on Immune Gene Response. <i>Frontiers in Genetics</i> , 2020, 11, 604. | 1.1 | 8         |
| 85 | The role of energy reserves in common carp performance inferred from phenotypic and genetic parameters. <i>Aquaculture</i> , 2021, 541, 736799.  | 1.7 | 5         |
| 86 | Genetic relationship between koi herpesvirus disease resistance and production traits inferred from sibling performance in Amur mirror carp. <i>Aquaculture</i> , 2020, 520, 734986.                         | 1.7 | 4         |